INTERNATIONAL LABOUR REVIEW

VOL. XXXVI, No. 4. OCTOBER 1937

Keynes' "General Theory"

by

Professor Gustav CASSEL

In the International Labour Review *we published an article by Professor A. P. Lerner* [1], *of the London School of Economics, in which he expounded in the simplest possible form the underlying argument of a work newly published by Mr. J. M. Keynes entitled "The General Theory of Employment, Interest and Money". The article was endorsed by Mr. Keynes before publication. We have now received from Professor Cassel the following article, in which he gives his main reasons for refuting the theory advanced by Mr. Keynes. The International Labour Office cannot, of course, take any direct part in such a controversy. Nevertheless, it has been thought well to place impartially before the readers of the* Review *both the "pros" and the "cons" of the argument, having regard to the unquestioned standing of the disputants among the economists of the day and the important bearing of the subject in dispute upon the dominant preoccupations of the International Labour Organisation.*

IN October 1936 an authorised account was published in this *Review* of what Mr. Keynes calls "a general theory of employment". This new theory, in view of the author's deservedly high position as an authority on the subject, may obviously have a marked influence on present-day economic thinking; and as it leads to practical conclusions of the most far-reaching nature, it is important that readers of this *Review* should not get the impression that this is the last word in economic science. In my view Keynes' exposition is defective, not only in

[1] Cf. *International Labour Review*, Vol. XXXIV, No. 4, Oct. 1936: "Mr. Keynes' 'General Theory of Employment, Interest and Money'", by A. P. LERNER.

observation of facts, but also in theoretical reasoning and in practical conclusions. I propose to state here some of my main objections. I shall restrict myself to a discussion of conditions of equilibrium; for any dynamic theory, deserving of being called "general", must hold true if disturbances disappear and a state of stable progress is attained. This is a good criterion, which should never be out of sight. In the case of Keynes' theory it is the more appropriate, as this theory has in fact very much the character of an equilibrium theory.

I

The general practical trend of Keynes' book is a fight against saving. It is, then, very remarkable that he pays no attention to progress and does not make any attempt to estimate the normal rate of progress of modern civilisation. Rather, he seems to consider that the possibilities of progress are beginning to be exhausted, and that the world is approaching a state of stagnation. But if there is no progress there is obviously no need for saving. No new theory is required to demonstrate that.

A broad conception of the essentials of modern economic life is impossible without forming at least an approximate idea of the general rate of progress. The estimate which I made long ago was something about 3 per cent. per annum, or the doubling of income and wealth in about 25 years. This has been confirmed by recent statistics relating to production. Taking such a rate as a standard the present generation should be prepared to double its capital in the next 25 years. If the volume of annual savings required for this purpose could be calculated for each separate country, the task to be fulfilled by the savers would stand out as quite overwhelming. Whoever claims to represent the true interests of Labour must realise the fundamental importance of progress and of the saving required for it, and should instinctively react against the degradation of saving which has of late come into fashion.

II

Equilibrium must be conceived as an equilibrium of prices in a social economy with a stable rate of progress. As all prices are interdependent they can only be determined by a system of simultaneous equations expressing the principle that prices

must be high enough to equalise demand and supply. For the purpose of this system prices of the elementary factors of production may conveniently be taken as the principal unknown quantities. The system determines these prices, and, at the same time, not only all other prices but also the remaining unknown factors, such as demand and supply, income, consumption, and saving, which accordingly can never be treated as independent and determining elements in the problem. In the light of this solution a number of factors such as " marginal utility " and " marginal productivity ", to which so much importance has been ascribed, stand out as mere fictions.

Recent endeavours to extend economic investigation beyond the case of equilibrium here referred to, and by co-ordinating the theories of prices, money, and business cycles, to build up a coherent theory of dynamic economics, no doubt deserve the most careful attention. But the first pre-requisite for the construction of such a general theory is a clear conception of the conditions of economic equilibrium. When such a conception is lacking, an endeavour to study dynamic economics can only lead to confusion ; and the treatment of certain elements, arbitrarily chosen in the economy, as determining factors, connected with others in relations of supposed necessity, can hardly amount to more than juggling with letters.

The equilibrium system of equations can only determine *relative* prices. The *absolute* height of prices is a monetary question, depending as it does on the supply of means of payment. Equilibrium requires that this supply be so regulated as to stabilise the general purchasing-power of money according to some acknowledged standard.

If this is done, the supply of means of payment ceases to be arbitrary ; and Keynes' endeavour to push the supply of money, particularly as a determinant of the rate of interest, into the foreground, and thus to restore long-dead mercantilist ideas must be a failure. Similarly, a discussion of the effects of hoarding is impossible without some definite assumption as to what should be considered a normal supply of means of payment. Generally, it must be recognised that the transformation of economic theory into a theory of prices requires a distinct theory of the determination of absolute prices, i.e., a theory of money.

Thus no validity can be attributed to the general reasoning which Keynes offers as a basis for the many conclusions which he tries to present as self-evident. The twentieth-century

development of economic theory here referred to cannot simply be passed over, as Keynes does in confining his criticism to the " classical school ".

After these general remarks on the theoretical shortcomings of Keynes' work we may return to an examination of his results.

III

In a progressive society there are always a great many possibilities of investment which must be left unused owing to lack of capital. Actual investment is the result of a continual selection of the best possibilities. The principal instrument for this selection is the price that has to be paid for the use of capital, i.e., the rate of interest. The fund of possibilities never becomes exhausted, as it is continually increased by new inventions and developments. Thus, potential demands for capital must stand in a queue awaiting satisfaction. This is the normal state of things in a progressive society. Under such circumstances one is quite justified in saying that every new amount saved gives rise to a corresponding investment. In the social economy actual investment is therefore equal to total net saving.

This, however, by no means involves identity. Equality between investment and saving is only attained under pressure of the necessity for paying interest. True, such demand for capital as is *satisfied* must always correspond to the supply. But this equality can only be established by excluding a much greater potential demand. This is possible only at a certain rate of interest ; and the rate is, therefore, actually determined by demand and supply. The elementary nature of economic equilibrium must be clearly grasped before any economic theory is possible. The determination of the rate of interest as a scarcity price paid for the use of capital occupies, and must continue to occupy, a central position in the general theory of price-formation. And it is of essential importance that uniformity of this theory be attained by treating interest as a price, like all other prices.

True, a discrimination between different rates of interest is required on account of the different degrees of liquidity of the loans contracted. But this consideration only calls for some modification in the fundamental treatment of interest as a scarcity price of capital-disposal. Keynes' endeavour to treat interest solely as a result of " liquidity preference " is a most

astonishing step backward in the development of the theory of interest.

In the *Economic Journal* (June 1937) Keynes says that " the initial novelty of my theory lies in my maintaining that it is not the rate of interest but the level of incomes which ensures equality between saving and investment ". This quotation may serve to illustrate the fundamental weakness in Keynes' theoretical apparatus. The " level of incomes " is obviously dependent upon all prices, including the rate of interest, and is just as much an unknown factor in the problem as are the several prices. The conditions of equilibrium determine all prices simultaneously ; and thus total income, as well as saving and investment, are determined. Among the conditions of equilibrium, however, a most important place is taken by that equation which states that the demand for capital disposal must be reduced to equality with the supply, that is to say, that an equality between investment and saving must be established. If Keynes claims to be able to exclude this equation from the conditions of equilibrium of social economy, he is simply wrong.

IV

It is impossible to ascribe to the " marginal efficiency of capital " a preponderant influence on the development of social economy. A closer analysis of this dim conception shows that it has no existence of its own, and that the only definite meaning that can be given to it is the rate of interest which has to be paid for the use of capital. This rate of interest is a price, which like all other prices is determined by the equilibrium system of equations.

The idea that " marginal productivity of capital "—whether on technical grounds or on the ground that capital supply reaches the saturation point—gradually approaches zero has no support whatever, be it in theoretical analysis or in observation of actual facts. There is no theoretical reason why the equilibrium rate of interest should have any general tendency to fall. It is quite conceivable that the rate of interest could remain constant in a uniformly progressive society, where both saving and investment grew at the same rate as the whole economy. In by far the greater part of the world borrowers to-day have to pay rates of interest which are felt as a brake on enterprise. This fact shows

that there is a real shortage of saving, and that therefore the use of capital has to be confined to such investments as can afford to pay the prevailing, quite substantial, rates of interest.

There are, no doubt, particularly under the present disturbed conditions, a number of savers who wish to keep their savings more liquid, and who content themselves with a lower rate of interest. Some privileged borrowers, among them governments and municipalities, take advantage of this fact and get money for their investments at rates of from 2 per cent. down to almost nothing. The savings which in this way are kept liquid are nevertheless invested and thus serve as actual purchasing power and fulfil their function in the social economy. The existence of such savings can certainly not be taken as a proof of that superabundant willingness to save which Keynes seems to regard as the most serious illness of our present society. Moreover, if people began to reduce their rate of saving the effect would probably be felt, not only in the short-term market but also in the long-term market. Thus the rate of interest for more durable use of capital would rise, and long-term investment would have to be curtailed.

To prove a general falling tendency in the rate of interest, resort is taken to the present transient and highly artificial conditions of the British capital market. If export of capital is prohibited and important home demands are severely rationed, and if in this way interest rates are kept at an artificially low level, a false impression is given of the real situation of the capital market. If at the same time monetary authorities in pursuance of a " cheap credit policy " keep their rates of interest lower than would correspond to equilibrium, and if in that way a progressive inflation of the currency develops, the public, which does not see the true explanation of what happens, naturally becomes fortified in its belief in the existence of a superfluity of capital.

Such mistaken impressions of an excessive supply of capital are a dangerously misleading guide for economic policy. From such premises to draw the conclusion that the rate of interest ought to be reduced still more until it ultimately vanishes seems to be an extraordinary sample of faulty economic reasoning.

The purpose of this reduction should be to encourage investment. For the same purpose Keynes wants governments to enter upon large schemes of public works. Considering what

governments have done and still do to deter private investment by high and arbitrary taxation, by all sorts of restrictions, national and international, and by bad monetary policy, it is, to say the least of it, curious that such mistakes should be exploited as a ground for widening the functions of governments as entrepreneurs.

V

Savings must exist in some concrete form. If they are not invested they are converted into money which is hoarded, and in such a case total saving may exceed investment. Naturally, for the economy as a whole, hoarding is limited by the supply of money. There is, however, no reason for assuming this supply to be rigidly fixed without regard to the willingness to hoard. On the contrary, it is necessary, as said above, to assume the supply of money to be regulated with a view to maintaining a stable price level, which means that supply must be extended to meet the requirements of hoarders. Equality between saving and investment is therefore no such strict necessity as Keynes assumes.

Nor does there seem to be any sufficient ground for the general condemnation of hoarding. There may be some persons whose "propensity" for keeping their money liquid is so strong that they refuse to make any use whatever of their incomes and insist on keeping them in form of cash. It is difficult to understand why such behaviour should *necessarily* damage the economy as a whole and reduce its total income. If the desire for hoarding were deliberately satisfied by an extra supply of cash for the purpose, we should have a group of hoarders still collaborating in social production, but abstaining from any participation in its results. The total real income of the economy would then be divided between the rest of its collaborators; and they should profit from such very advantageous conditions. Monetary authorities, in providing something to hoard, and in adjusting, as they ought to do, the supply of effective means of payment to the needs of active trade in such a way as to keep the general level of commodity prices stable, could prevent any monetary disturbances arising from hoarding. There would then be no reason why the economy should not attain a sound equilibrium with full employment of labour. And particularly, there would be no room for the mass of dilettante proposals to cure an imaginary illness of the economy by

those highly artificial forms of money for which Keynes has expressed his most inappropriate sympathy.

VI

There can be no such thing as a general theory of employment (or unemployment). As described above [1], economic equilibrium is dependent upon the simultaneous fulfilment of a series of conditions involving an equality between demand and supply. The corresponding system of equations determines at the same time all prices and also all the other unknowns in the problem. There is always a solution of such a system admitting full employment of every factor of production. Partial unemployment of a certain factor can therefore never be explained by an assumed impossibility of finding a better solution of the system of equations representing equilibrium. This conclusion may seem to be too abstract to be of much practical value. Still, it does at least prove that, if unemployment actually occurs, it must be caused by temporary disturbances and is a feature of a state of transition. But disturbances are of a varying nature, and can hardly all be included in any general theory. At any rate, it is entirely out of the question that a certain amount of unemployment could be deduced as the logical consequence of general and permanent conditions obtaining in social economy, such as " propensity " to save or to consume.

Nor can it be proved that an economy with such " propensity to save " as, according to Keynes, would cause a fall of total income, must necessarily suffer from unemployment. If all the unemployed died, we should have an economy in equilibrium and with full employment, but still suffering from the supposed malady of an excessive " propensity to save ".

Keynes' objection that labour cannot be expected to accept the level of nominal wages determined by the equations of equilibrium cannot be admitted. Equilibrium can be attained at any level of nominal wages, if only the value of the currency is adjusted to that level. This observation has great practical importance, in so far as it emphasises the responsibility of labour for the monetary policy of the country. Swedish experience in the beginning of the 'twenties has proved that organised labour may assent even to a severe reduction in nominal wages, when it is convinced that such sacrifice must be made for the

[1] Cf. pp. 438-439 above.

soundness of the currency. In a country where labour is strongly organised, monetary authorities should always be in touch with labour leaders in determining the general aim of their policy.

In the system of equations it is of course always possible to introduce the assumption that a certain amount of some factor of production should be left unused. There is a solution of the system even then. For instance, if it is decided in advance to provide a subsistence for certain groups of labour, either by aid of public works or otherwise, the system of equations will admit a solution with full employment for the rest of the workmen.

It is impossible to prove that a solution of the general system of equations with full employment for labour requires a lower standard of wages than that which can be obtained under the condition of only partial employment. The proposition is *a priori* improbable, as the total income of society must be greater when all efficient labour is employed.

VII

Whatever may be said of Keynes' conception of social economy, it possesses no general validity and no necessity. It may perhaps correspond to the conditions of a dying civilisation, where private initiative and enterprise are approaching a state of complete paralysation, and where the interest of the individual concentrates upon securing means of existence for the future without doing or risking anything. It is to be hoped that the generation now growing up will definitely reject such ideas of existence, and, conscious of the unlimited possibilities of progress, devote its efforts to never-ceasing endeavours to raise the general standard of living.

Prolonged Unemployment, Technical Progress and the Conquest of New Markets

by

Fritz STERNBERG

On several occasions the Review *has contained articles*[1] *dealing with technological unemployment—a question upon which the economists' opinions are divided, some holding that technical progress creates possibilities of employment while others maintain that it must necessarily give rise to permanent unemployment. Mr. Sternberg, posing the problem on the ground of facts, asks why technical progress, after having expanded during the nineteenth century without giving rise to widespread unemployment, now appears to tend more and more in the direction of restricting employment.*

According to the author, the problem is essentially one of markets. In the past the existence of many non-industrialised countries made it possible to dispose of ever-increasing stocks, and thus readily to reabsorb those workers who had been thrown out of employment by the introduction of machinery. At the present time, the impossibility of finding new markets in a world which is almost wholly industrialised condemns to forced inactivity those workers who, as a result of technical progress, have been ousted from their employment. As on the other hand the sharp competition which exists in commerce can only tend towards further technical progress, it would appear that the victims of what is called technological unemployment have less and less hope of getting back into the circuit of production. This is the thesis, reduced to its essential points, wich is maintained by the author, who bases his contention principally on the industrial and commercial statistics of the chief countries of production.

---

[1] Cf. particularly *International Labour Review:* Vol. XVII, No. 6, June 1928: "Rationalisation and Unemployment", by Henri Fuss; Vol. XXVII, No. 3, March 1933: "Technical Progress and Unemployment", by Mentor Bouniatian; Vol. XXVIII, No. 1, July 1933: "Technical Progress and Unemployment", by Emil Lederer.

THERE has undoubtedly never been a period during the existence of our capitalist economic system in which unemployment as a continuing phenomenon has been so extensive as it is at the present time. Nor can there be any doubt that this prolonged unemployment is closely connected with technical progress—with rationalisation, as it is now called. But the mere attempt to analyse the functional connections between those phenomena gives rise to very marked differences of opinion. This divergency of views among economists becomes almost irreconcilable when they speculate on the probable continuance or disappearance of unemployment as a lasting phenomenon in the immediately predictable future.

The purpose of this article is to study the problem in connection with a number of factors all of which have been frequently dealt with individually but rarely from the point of view which will be taken here—that of the conquest of new markets.

The author hopes to show in the first place that the conquest of new markets is of fundamental importance for the trend of the labour market. On the other hand, it will be shown that there are close connections between the conquest of new markets and the speed at which technical progress is made.

It goes without saying that the immediate consequence of technical progress is unemployment. Those who view the immediate future of the labour market with a certain degree of optimism base their attitude on the argument that technical progress was taking place all through the nineteenth century; and that the large numbers of workers who were thrown out of employment by that progress always found fresh employment after a relatively short period. In explaining this, they point out that not all the workers who lose their posts because machinery is introduced in a given factory become unemployed, because workers are required to produce those new machines. To this, one may reply that, theoretically, the number of workers thrown out of employment must always be larger than the number of those who find fresh employment in the manufacture of machinery, for otherwise the introduction of that machinery would not be profitable.

The question then arises, how the surplus remaining after a certain number have found employment in the manufacture of machines can be reabsorbed in the process of production. The reply given—and this is the essential link in the chain of argument—is that new machinery is introduced only when it brings with it an increase in the productivity of human labour.

The force of competition that induces the manufacturer to bring his factory up to date, to adopt more intensive methods and to introduce new and better machinery, also reduces the prices of the goods produced. This means an increase in the purchasing power of the population, and it is therefore possible to increase production to an extent corresponding to the rise in purchasing power. In this way, the workers who were formerly thrown out of employment will find fresh employment as a result of the increase in production. It is impossible to prove by theoretical argument that the number of workers who thus find fresh employment is exactly the same as the number thrown out of employment, so that the one balances the other. Certain conclusions on the subject can, however, be drawn from history, for during the whole of the nineteenth century and the beginning of the present century up to the war technical progress was taking place and workers were temporarily thrown out of employment; at the same time the productivity of labour increased, and as products became cheaper, the real wages of the workers rose, so that it was possible, as a result of the increased demand for consumers' goods, to extend production and thus provide fresh employment for the workers.

During that period, therefore, the phenomenon of continued unemployment for millions of workers never occurred. On the other hand, it can be shown that in the leading highly capitalistic countries, such as Britain, France, Germany and the United States, wages rose appreciably from the middle of the nineteenth century onwards—in some countries by almost 100 per cent. in two generations—and that the number of persons employed in the economically most advanced countries rose by several millions.

It should be noted that it is this reference to the well-known course of development in the sixty years preceding the war that makes the argument of workers finding fresh employment as soon as they are thrown out of work by technical progress so peculiarly attractive. Mere theoretical analysis by no means indicates that such is necessarily the case, as will be shown below.

It is true that when rapid technical advances take place and the productivity of labour increases there is a probability that prices will fall. But it is by no means proved that the purchasing power of the population as a whole, and more particularly of the workers, must necessarily increase as a consequence.

No one has ever tried to prove that such is the case, and no proof can be found. If prices fall, there is no reason why the

hourly wages of the workers should not fall in the same proportion. Is there any reason why the real wages of the workers should rise when prices fall? Whether real wages actually increase or not when a fall in prices takes place depends essentially on the labour-market developments resulting from that economic situation. During the nineteenth century the labour market developed along comparatively favourable lines, for reasons to be dealt with shortly; and therefore the increased productivity of labour did result in a rise in real wages. The improvement in real wages had in turn a favourable influence on the development of employment opportunities for workers.

It will be seen that on this question mere theoretical analysis cannot take us very far. An increase in the productivity of labour as the result of technical progress may be accompanied by a rise in real wages, but such is not necessarily the case. Whether the rise in real wages will occur or not can be determined only by a careful analysis of the labour-market position. In the following pages two questions will be considered: (1) how the labour market developed in the leading countries in the decades before the war, and (2) whether changes have occurred on the labour market since the war, and if so, what those changes are. The analysis of these points will provide an answer to the question why the consequences of technical progress for the workers were different during the period from the middle of the nineteenth century to the beginning of the war from what they were after the war.

I.

The Position of the Labour Market before the War

It is a well-known fact that capitalistic methods of production did not develop simultaneously in every country. In several countries capitalism was already the predominant form—in fact almost the only form—of production at a time when its development was only beginning in other countries. In practically every case the tendency to expand is confined in the first instance within the boundaries of the country concerned; and it is only when a certain stage of development has been reached that efforts are made to spread these capitalistic methods beyond those boundaries. It must not, of course, be imagined that no expansion beyond the boundaries of the country takes place until every trace of pre-capitalistic forms of production has disappeared within the country itself. But in general there is no very marked movement to extend the pro-

cess to capitalistically backward countries until capitalistic methods of production have become the dominant form in the country of origin or the home country.

It will be necessary to consider first of all the position of the labour market during the period when capitalism was beginning to spread beyond the boundaries of the capitalistic countries. Before that period, when capitalistic forms of production were just reaching a dominating position within the industrial countries, the available reserves of industrial workers were being increased, not only as a result of technical progress but also under the influence of two other factors. The competitive process which gives the impulse to technical progress creates a reserve of workers by dismissing a certain number; and this reserve tends all the more to increase because, in many fields of production, handicrafts are no longer able to compete with large undertakings producing more cheaply, and many craftsmen go to swell the army of the unemployed. There is a special reason why the gradual disappearance of the crafts should be considered as a separate factor. The dismissal of workers as a result of the introduction of machinery occurs at every stage in the history of the development of capitalistic methods of production. Important technical inventions led to an increase in the number of unemployed workers during the early period of capitalism and, similarly, in the period of highly-developed capitalism and of imperialism. The extermination of handicrafts by competition, on the other hand, is a process that occurs only once in the history of each country—a process that is already more or less complete in the older capitalistic countries, where the competitive struggle is no longer between the capitalist system and the crafts (for where craftsmen still exist, they have been incorporated into that system) but between large-scale capitalists and smaller ones. This new struggle naturally does little to increase the volume of unemployment.

The craftsmen who were driven to abandon their trade by competition did not constitute the only or the most important addition to the reserve of industrial workers. The most vital additional factor was the rural exodus, and, more particularly, the exodus of agricultural workers. During the earlier period of the capitalist system, this factor was certainly the most important one. But by the time that capitalistic methods had reached a dominant position within any country, the rural exodus had ceased to be one of the determining factors.

This means that the two factors which went to swell the number of unemployed created by technical progress (the competitive extermination of handicrafts and the rural exodus) had lost much of their importance by the time that the capitalist system began to spread to any great extent beyond the boundaries of the capitalistic countries. When that took place, two other factors had begun to relieve the situation on the labour market. The first of these was the result of the advance of capitalism into territories that were still, to some extent, colonial in character, more especially the American continent as a whole. At that period the United States not only welcomed European capital, but also admitted tens of millions of immigrants. During the second half of the nineteenth century in particular, North and South America absorbed an immense number of persons who would otherwise have remained unemployed on the European labour market; some of those who emigrated were workers or craftsmen who had lost their occupation, while others were agricultural workers who went directly overseas instead of remaining unemployed in the European cities.

From 1820 to 1870 about 7½ million persons emigrated to the United States. The number of immigrants to the United States from 1871 to 1900 is shown below (year ending 30 June):

1871	321,350	1886	334,203
1872	404,806	1887	490,109
1873	459,803	1888	546,889
1874	313,339	1889	444,427
1875	227,498	1890	455,302
1876	169,986	1891	560,319
1877	141,857	1892	623,084
1878	138,469	1893	439,730
1879	177,826	1894	285,631
1880	457,257	1895	258,536
1881	669,431	1896	343,267
1882	788,992	1897	230,832
1883	603,322	1898	229,299
1884	518,592	1899	311,715
1885	395,346	1900	448,572

The volume of immigration rose considerably from 1900 until the beginning of the war. [1] At the same time, large numbers of workers emigrated from Europe to Argentina, Canada, etc.

In addition to this spread of capitalism to countries which required both capital and human labour, there was at the same time a development of capitalistic methods of production in territories which were more backward and in which the course

[1] Cf. p. 459 below.

and rate of penetration by industrial methods and by capital were more or less controlled by the highly-developed European countries. It was at this time that capitalistic methods began their triumphant march throughout the world : in Asia, Australia, Africa, and in many of the less-industrialised European countries much was done at this period to develop existing industries or to create an industrial system. The foreign trade of the world increased to a tremendous extent. Between the beginning of the century and the outbreak of war the world's foreign trade practically doubled in value.

In considering this extremely rapid expansion, a distinction must be made between two groups of countries. On the one hand, capitalist expansion took place in countries which were sovereign States, while, on the other hand, the expansion was very marked in colonial territories where the course of development was determined by the needs of the mother countries. From the point of view of the present study, it is important to note that in many colonial countries steps were taken to prevent, or at least to delay, the growth of industries of any importance. The consequence was that at that time no very large indigenous working class developed in the colonial countries, and, as a further consequence, the rapid development of the export industries in the capitalistic mother countries increased the demand for workers.

This forced expansion in the territories which were capitalistically more backward and the forced development of exports to those countries would not have been possible if the more highly-developed countries had imagined that their commodities would immediately be paid for in the form of other commodities. During this period, therefore, the export of capital began to develop to an extraordinary extent. The amount of British capital exported before the war has been assessed at about 70,000 million gold marks ; that of Germany is estimated at from 25,000 to 30,000 millions, and that of France at a rather higher figure. If the exports of capital from the smaller European States be added to those of the three most important creditor countries of the period, the amount of exported capital in the world at that time may be assessed at about 150,000 million gold marks.

This process of capital export had a dual influence in relieving the situation on the labour market. It provided an opportunity for the expansion of export industries without any

necessity for the less highly-capitalised countries to pay promptly in the form of commodities for the goods exported to them. This meant that increasingly large numbers of workers could be employed in those export industries. At the same time, it tended to relieve the labour market because of the influence which, combined with the general development of foreign trade, it exerted on the rate of technical progress.

It has been seen that unemployment and a reserve of industrial labour are created by the substitution of machinery for human labour, by the adoption of more modern and more intensive working methods, and by the rationalisation of undertakings. The individual employer is driven to those methods by competition.

Competition existed at that period, and the process of adopting more intensive and modern methods was going on then as now. But at that time competition took place in the field of foreign trade, the curve of which was then rising steeply. That was the time when Germany and Britain were fierce competitors ; from the beginning of the century up to the time of the war, German foreign trade increased by 100 per cent. and British foreign trade by more than 50 per cent. The export of capital became so extensive that at certain times, in Britain for instance, internal new issues were taken up less eagerly than foreign loans. At that time there were abundant openings for capitalistic development with extremely high profits throughout the whole world, and this made competition less acute in the highly capitalistic centres. Consequently, although industrial undertakings were brought up to date and made to work more intensively, the speed of this process was not so great ; workers were thrown out of employment by machinery, but not to such a marked extent. Figures will be given later to show that technical progress before the war took place much more slowly than in the decade from 1925 to 1935.

The position during this period may be summed up as follows. The phenomena of the competitive extermination of handicrafts and the rural exodus, which had formerly tended to increase the volume of unemployment created by the introduction of machinery, had become factors of much less importance. At that same period the labour market found a relief valve in the fact that, while capital made large profits in the colonies and in territories not so far developed on a capitalistic basis, so that production could extend very rapidly,

there was no simultaneous creation of a working class in the colonies, and, as a result, large numbers of workers could emigrate to the New World, while at the same time the competitive struggle between the highly industrialised centres became somewhat less acute because of the expansion of capitalistic methods throughout the world.

The combined effect of these factors was a comparatively favourable situation on the labour market. In the depressions that occurred during that period, unemployment never reached even the figures which at present hold good for boom periods. During prosperous periods, which represented the normal condition at that time, there was practically no unemployment at all.

Such being the position on the labour market, it will readily be understood that the large profits made at that time were accompanied by high wages for the workers. The consequence of these high wages was mentioned at the beginning of this article. In Britain, for example, real wages rose by about 100 per cent. from 1850 to 1900, and the purchasing power of the British workers at the end of the century was thus twice as high as in the middle of the century, so that new factories were constantly being built to meet increased purchasing power. These factories provided employment for the workers who had been thrown out of the productive process as a result of technical progress.

Summing up the results of this part of the investigation, it may be said that a number of uniquely propitious factors came into play between the middle of last century and the beginning of the war, and exerted a favourable influence on the labour market of the most highly developed capitalist countries. The factors that tended to burden the labour market exerted a much smaller influence than formerly, and the factors that helped it were much more influential than they had been. There was technical progress at that period, but it was incomparably slower than at present. Because of the relatively favourable situation on the labour market as a result of the various factors referred to, wages rose, and this in turn tended also to relieve the labour market.

II

The Position of the Labour Market after the War

In order to obtain an exact analysis of the present situation on the labour market, all that is necessary is to follow the recent

developments of the various factors which were in operation from the middle of last century until the beginning of the war.

This means that one must consider the possibility of finding new markets and of extending production, together with the opportunities for the more advanced industrial countries to develop the more backward areas and supply them with capital.

Four ways in which capitalistic methods of production can be extended to other countries may be distinguished :

1. The complete conversion to the capitalist form of production of surviving earlier forms may take place within States that are already predominantly capitalistic in organisation.

2. A territory in which production methods are predominantly pre-capitalistic may be converted to capitalism under the influence of an imperialistic mother country, which determines the form and rapidity of this process according to its own economic needs. This method is met with principally in colonial territories.

3. An economic system in which production methods are predominantly pre-capitalistic may be converted to capitalism by the efforts of one powerful section within the country. This is the method that was followed in Europe, and more recently in Japan.

4. The conversion to capitalist methods of a territory formerly mainly pre-capitalistic and sparsely populated may be carried out and controlled by certain sections of the population of that country, although at the same time large quantities of capital are obtained from the European countries. An example of this can be found in the development of the United States during the nineteenth century.

The characteristic feature of capitalism in the second half of the nineteenth century and the beginning of the present century up to the war was that pre-capitalistic forms of production were rapidly changed to capitalistic forms, so that the external field of production was greatly expanded. Now, on the contrary, capitalistic methods find increasingly great obstacles in their path when they endeavour to spread to external fields. The reasons for this may be briefly explained.

With regard to the first of the methods referred to above, it may be noted that the area within the older capitalist countries which had not been converted to capitalist methods was still

of considerable importance up to the time of the war, but that area has become smaller and smaller as capitalism spread.

With regard to the third method, it should be noted that the openings for the external expansion of capitalism have shrunk both in States that are politically independent and in those which legally possess political independence but are more or less economically dependent on some imperialistic State.

In the case of Europe, the situation can be very briefly stated. Before the war there were two large States—Austria-Hungary and Russia—which offered considerable scope for capitalistic development. The spread of capitalist methods to those countries offered the capitalistic countries of the world numerous opportunities for investment and exports. To-day, as a result of the war, there are a large number of small or medium-sized States, all endeavouring to create their own industries within their own boundaries and closing their frontiers by tariff barriers. The creation of those new States has also meant that the rate of industrial development has become slower. Capitalism can develop more quickly in large united territories than in a number of small States. At the same time the possible reaction on the capital market of the leading imperialistic countries becomes less and less marked as the small States develop their own industries.

The most extensive economic body in Europe in which capitalism had not become the dominant form of production before the war was Russia. At that time Russia was only beginning to be developed on capitalist lines, and it offered a wide field in which the capitalist countries could extend their foreign trade and at the same time find openings for the investment of their exported capital. Large sections of the industrial plant of Russia were in foreign hands.

The exports of capital from France to Russia before the war have been estimated at more than a quarter of the total French exports of capital. Germany also sent increasing quantities of capital to Russia. This situation changed entirely after the war, the reasons for the change being sufficiently well known. The long-term export of capital to Soviet Russia on a large scale has ceased. Even in its best years foreign trade with Russia has never reached the pre-war level either of imports or of exports. Moreover, the Russian monopoly of foreign trade and the five-year plans have meant that the categories of commodities which may be imported are fixed in accordance with the needs of the Russian planned economic

system. The consequence of this is that the proportion of producers' goods has risen and the proportion of consumers' goods has fallen. Russia is endeavouring to complete the establishment of its own industries for the supply of producers' goods in the shortest possible time. This means that, even if Russia's foreign trade increases, the influence on the export industries of the more important exporting countries will not be very great.

It will thus be seen that in Europe great difficulties have arisen which prevent the further extension of the field of production. In the countries in which capitalism is highly developed, the area that is not so far developed on those lines has become steadily smaller, and in the areas which were formerly only semi-capitalistic a number of new States have sprung up, with the result that the rate of economic development has become slower ; and their tariff policy prevents the development of the industries of the more advanced countries. At the same time, Soviet Russia no longer provides the wide field of exploitation for the more advanced countries that pre-war Russia offered.

Turning to the fourth method, it will be found that, while the possibility of finding new markets in Europe has decreased, openings for the expansion of the capitalist system in previously undeveloped territories have practically vanished. During the 60 years immediately preceding the war, the process of industrial development in North and South America offered one of the most important opportunities for the external expansion of capitalist methods of production. In this direction very marked changes have taken place. Before the war the United States was a debtor country, whereas now it is one of the most important creditor countries in the world. Formerly it was a country that was largely of a colonial structure. To-day practically no trace of those conditions remains. Formerly, as was pointed out, it could absorb millions of European emigrants, whereas it has now ceased to provide such opportunities (cf. p. 451). At the same time it has become one of the most serious competitors of the " old " European countries on all the world markets. The details of this position are well known. The essential point in the present connection is that the industrial development of the whole continent of America outside the United States has tended more and more to be carried through by the United States and to a correspondingly less extent by European countries.

The colonial nature of North and South America, which

offered such ample scope for the expansion of European capitalism in the nineteenth and twentieth centuries, has largely vanished in so far as the United States is concerned. Where these characteristics still exist in other parts of America, the scope for the European exporting industries is becoming increasingly restricted.

There remains the second method of extending capitalist forms of production. It has been seen that the possibilities of external expansion in Europe have become much smaller, and that they continue to exist in America only in an acutely competitive form. Similarly, industrial advances in colonial territories are much more difficult to carry through now than they were before the war. Here again the facts are common knowledge. Throughout the whole of the nineteenth century the European countries were extending their colonial possessions. To-day there is practically no more territory to be divided up between them. At the same time, as was pointed out, the industrial development of those colonial countries can no longer be held up or prevented, as it could in former times. All these territories have developed industries of their own, beginning with the textile industry, and have created their own working classes, so that they can no longer help to relieve the labour markets of the home countries as before the war.

A word must be said about China. This is no place to discuss the probable future economic and political development of that vast territory, in which about a fifth of the population of the world lives. It must suffice to mention one fact which is important in the present connection. The Chinese share in the foreign trade of the world during the boom period after the war was only just over 2 per cent.; from 1933 to 1935 it fell below that figure, and it will require great efforts before China recovers even that 2 per cent. share of the world's trade.

To sum up, then, it may be said that, throughout the whole world, it is far more difficult to find new markets to-day than it was in the decades before the war. At the same time, the industrialisation of areas that were not highly developed in those days has brought new competitors on to the market. Before the war, Britain, France and Germany were the large countries that played a predominant part in the conquest of new markets. These three have now been joined by the United States, Japan and Italy. The consequence is that competition has become increasingly acute, because the openings are fewer and the number of competitors larger.

The influence of this change in world economic conditions on the position of the labour market has now to be considered.

The first point to be emphasised is that as a result of the changed economic situation the foreign trade of the world took on an entirely new aspect after the war. This question will be discussed in detail later (cf. p. 479). At this point it will suffice to mention that there was no longer any question of an influx of workers to the export industries on the same scale as before the war.

It was mentioned above [1] that from 1850 to 1914 the United States absorbed large numbers of European emigrants. Here again a far-reaching change took place. It should be particularly noted that it was not only after the beginning of the world economic depression, but actually during the boom period, that emigration to the United States and to the American continent in general began to decline. The comparative influx of immigrants to the United States before and after the war can be seen from the following table :

Pre-war [1]		Post-war	
1910	1,041,579	1925	294,314
1911	878,587	1926	304,488
1912	838,172	1927	335,175
1913	1,197,892	1928	307,255
1914	1,218,480	1929	279,678

[1] Year ending 30 June.

As is well known, the immigration laws of the United States have become stricter and stricter. Since 1931 the immigration figure has been less than 100,000 annually, and the total for the three years from 1933 to 1935 inclusive was not even 100,000.

In Canada and in the South American countries, such as Argentina, the volume of immigration fell during the prosperous years before the economic depression to a lower figure than the pre-war average. This means that the transfer of a large section of the reserve industrial population, which had provided a valuable safety valve for the European labour market before the war, has declined very considerably.

The tendency to develop an indigenous working class in colonies and in other countries of a more or less colonial structure became much more marked during and after the war. This is true of India, China, Egypt and the French colonies. The more these colonies and similar territories developed their own industries and their own working class, the less possibility

[1] Cf. p. 451 above.

there was for the more highly developed industrial countries to expand their activities and relieve their own labour markets.

The value of exports of capital as a means of relieving the situation on the labour market in the years before the war was analysed above. To-day it will be found that exports of capital no longer play the important part that they did in the decades preceding the war. The reasons for this must be examined in some detail.

In the first part of this article the total amount of capital exported was estimated as being about 150,000 million gold marks shortly before the war. It is interesting to note that at the same time the foreign trade of the world amounted to some 160,000 millions, so that the amount of exported capital was approximately the same as the annual volume of world trade.

The annual rate of increase can be seen from the amounts invested by the three most important countries in their colonies and abroad in the years immediately preceding the war :

Great Britain	3,000—3,500	million marks
France	1,600—2,000	,, ,,
Germany	800—1,200	,, ,,

If allowance is made for the capital exported by the smaller States it will be approximately correct to say that the amount of capital exported annually before the war was about 6,000 millions of pre-war marks.

Extensive changes took place in the exporting of capital as a result of the war and the subsequent economic developments. In the first place, it will be noted that Germany ceased to be one of the creditor countries. Germany's assets abroad used to be estimated at from 24,000 to 40,000 millions. Part of this was lost during the war and part was employed to pay for the raw materials required for military purposes. After the war Germany became a debtor country. No exact figures have ever been published to show how much of the former German capital invested abroad was saved from loss, but it is certain that German indebtedness at the present time is much larger than German assets. For a considerable time to come Germany will not be one of the countries with a credit balance of payments enabling it to export large quantities of capital to other countries.

A second change that took place was that France practically ceased to be a capital-exporting country. France must have lost about one-half of the 40,000 million francs it had invested

abroad ; the capital invested in Russia was entirely lost, and a considerable proportion of the capital invested in pre-war Austria-Hungary, Turkey and the Balkan States must also have been lost. After these heavy losses it became more and more difficult to issue foreign loans in Paris. Before the war about 2,000 million gold francs left the country annually, whereas the total sum exported in the ten years from 1923 to 1933 was only about 6,000 million paper francs, equivalent to 1,200 million gold francs. During these 10 years, therefore, when France was not seriously affected by the depression, the exports of capital from France were less than they had been in one year before the war. Moreover, most of this relatively small sum went to the French colonies.

When France and Germany left the ranks of the capital-exporting countries there remained only a few small States together with the two great Anglo-Saxon Powers—Great Britain and the United States. Britain, in contrast to Germany and France, was able to save most of its foreign investments during the war period. It certainly suffered serious losses as a result of the war and through financing its allies ; but the position of the City as the banker of the world remained secure. If the amount of capital exported from Britain before the war be compared with the exports during the boom period after the war it will be seen that very important changes had taken place even by that time (i.e., before the economic depression). A comparison of the new issues floated in Britain before and after the war is given below.

DISTRIBUTION OF NEW CAPITAL SUBSCRIBED IN GREAT BRITAIN IN 1913 AND 1923-1929

(*Million* £.)

Year	Great Britain	British possessions	Foreign countries
1913	35.9	76.1	84.4
1923	133.9	92.7	44.7
1924	84.6	72.2	52.4
1925	155.0	60.9	16.2
1926	129.1	53.1	48.4
1927	206.8	99.8	48.4
1928	263.5	63.1	42.3
1929	198.0	60.9	26.2

These figures show that the total amount of capital available for the British economic system was greater in value after the war than before the war. But the country was obliged, in order to maintain its rate of technical development on a level approaching that of its important competitors on the world market, such as Germany and the United States, to invest a much larger percentage of its capital in Britain than had been the case before the war. There was also an increase in the proportion invested in British possessions and a consequent decrease in the amount invested in foreign countries. The average amount of capital exported to British possessions annually from 1923 to 1929 was over 70 million pounds, which is only a few millions less (in value) than before the war. On the other hand, the value of the capital exported to foreign countries annually during the same period was barely half that exported before the war. It should also be noted that the general level of world prices and the level of prices in Great Britain during those years were much higher than in the pre-war period. These differences in prices will be discussed later in connection with the analysis of world foreign trade (cf. p. 470). On the basis of 1913 prices, British exports of capital even in those years of favourable trade represented only a very small proportion of the pre-war figures.

Whereas even during the boom period the exports of capital from Germany and France were practically non-existent and the figure for Britain was only a fraction of the pre-war figure (reckoned in pre-war purchasing power), the United States, as was mentioned earlier, had become a creditor country instead of a debtor country. During those same years the exports of capital from the United States increased very considerably.

FOREIGN LOANS ISSUED IN THE UNITED STATES
(*Million dollars*)

Year	New capital	Funding loans	Total
1923	280	80	360
1924	997	248	1,244
1925	1,086	221	1,307
1926	1,145	205	1,349
1927	1,561	164	1,724
1928	1,319	258	1,576
1929	758	22	780

During the period 1923-1929 the amount of new capital exported from the United States was over 7,000 million dollars, making an average of 1,000 millions a year. Thus the amount of capital exported was about twice as large as the amount exported by Great Britain. The total capital exports of the world during that period may be estimated at rather more than 1,500 million dollars annually, or the equivalent of rather more than 300 million pounds sterling or 6,000 million gold marks. For the purposes of the present study the important point is that even during this period of comparative prosperity the capital exports of the world, allowing for the difference in prices, were never as high as in the years just before the war.

During the world depression and the succeeding years the volume of exported capital fell to a very low figure. Of France all that can be said is that during the depression its exports of capital, which had been very small before, did not increase ; it was only last year that any appreciable volume of capital was exported, in part to Poland. The only large Power which never entirely ceased to export capital even during the depression was Great Britain. Since 1930 the developments on the British capital market have been as follows.

DISTRIBUTION OF NEW CAPITAL SUBSCRIBED IN GREAT BRITAIN, 1930-1935

(*Million* £)

Year	Great Britain	British possessions	Foreign countries
1930	170.6	61.4	35.7
1931	54.5	38.5	9.1
1932	163.0	25.5	0.3
1933	210.2	29.1	5.3
1934	137.6	29.9	1.4
1935	220.7	15.2	0.2

Those figures show that the tendencies which were already definitely marked during the period of prosperity continued in Britain during the depression and are still exerting their influence. Considerable capital sums were still invested in Britain itself, but less and less capital went to foreign countries. On a rough average the capital exported during that period

was only about a third of the amount exported in the previous boom period. At the same time the British colonies and dominions absorbed an increasingly large proportion of the capital exports of the mother country.

While the export of capital from Britain during the depression still continued to a certain extent, in the United States it ceased almost entirely. In 1931 and 1932 only very small amounts were exported. In recent years the exports were practically nil, and such loans as were subscribed in New York were used simply to redeem earlier loans. The course of development in the United States since 1930 is shown in the following table.

FOREIGN LOANS FLOATED IN THE U.S.A.
(*Million dollars*)

Year	New capital	Funding loans	Total
1930	1,009	127	1,135
1931	254	14	268
1932	26	40	66
1933	—	62	62
1934	—	61	61
1935	—	76	76

These figures require no commentary ; in the last few years America has disappeared almost entirely from the ranks of the capital-exporting countries.

To sum up, it may be said that even during the boom period the volume of capital exported throughout the world never reached the pre-war level ; and during the depression it collapsed completely. In the last few years it has risen again to some extent, but even now it represents only a very small proportion of the pre-war figures. The obvious consequence is that exports of capital, reduced as they are, exercise a much less marked influence on the labour market than did the pre-war exports. Thus, one more of the factors that formerly tended to relieve the pressure on the labour market to a quite considerable extent has become much less effective.

When considering the post-war period, account has to be taken of the various factors which are referred to collectively as rationalisation. The process of rationalisation is an extremely

old one. Ever since a capitalist system has existed there has been rationalisation ; for essentially this means nothing more than a tendency towards technical progress and the desire to adopt modern methods and substitute machinery for human labour. The reason why the term " rationalisation " was adopted after the war to describe this process was that the rate of development in the direction of more intensive working methods and the substitution of machinery for human labour was so unusually rapid. For our present purpose the essential point is not merely to recognise that the rate of rationalisation is much higher at present than it formerly was, but rather to discover the reasons for this phenomenon. These reasons naturally do not lie in the technical advances themselves ; it is ridiculous to suggest that in the post-war period engineers have been successful in making far more new inventions and that therefore the speed of rationalisation has increased. Such a view implies a complete misunderstanding of the relationship between economic life and technical advances. In the great majority of cases the technical invention is made long before it can be profitably developed and applied in practice. The moment at which it can be profitably used for production purposes in the capitalist system depends on the laws governing the economic process. What are the conditions that result in a more rapid rate of rationalisation ?

The application of technical progress is a consequence of competition. Its application at a very rapid rate—that is, rationalisation—must therefore be the result of more acute competition within each capitalist country and more acute competition between the industries of the different capitalist countries on the world market.

Increasingly severe competition is one of the charateristics of modern capitalism. That becomes clear from the preceding analysis of the world economic situation and the increasing difficulties in extending the external field of production. If it becomes more difficult than formerly to extend this field of production, then the economic systems of the various countries organised on a capitalist basis will be obliged to rationalise more extensively in order to retain their competitive power on the world's markets and to transfer to their competitors the disadvantages resulting from the restriction of the possibilities of production.

Very generally speaking, the accumulation and investment of fresh capital may have the following reactions on the reserve

supply of industrial labour. If an accumulation of capital occurs under the capitalist system without any technical progress, then the number of workers employed will increase in proportion to the increase in the amount of capital invested in production. If 50 per cent. of the original capital was invested in machinery and plant and raw materials and 50 per cent. in wages, and the number of workers employed was then 10 millions, a 5 per cent. increase in the amount of capital invested in production will, if no technical progress takes place, permit an additional 500,000 workers to be engaged. But if the new capital is so invested that 700,000 units go to machinery and plant and raw materials and only 300,000 to wages, then only 300,000 new workers can be engaged on the basis laid down above. This is true only on the assumption that the distribution of the old capital is not affected by the introduction of new machinery. But as the distribution of the old capital between machinery and materials on the one hand and wages on the other also changes, the following results are possible :

1. The addition of new capital may change the distribution of the old capital, but nevertheless more workers may be employed with the old and the new capital than formerly.

2. The addition of new capital may change the distribution of the old capital in such a way that the same number of workers is employed with the old and the new capital as before.

3. The addition of new capital may alter the distribution of the old capital to some extent and the methods of production in the undertaking may be brought so up to date and made so intensive that fewer workers are employed with the old and the new capital together than was the case formerly with the old capital alone.

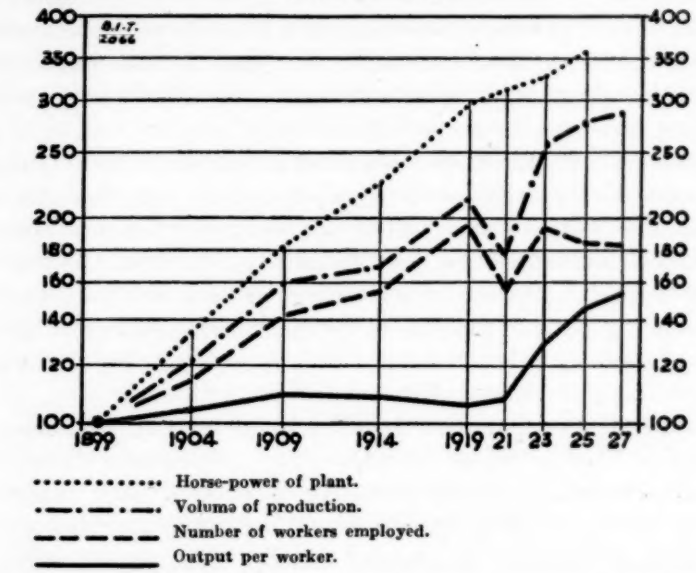
In the pre-war period, when the external field of production was growing so rapidly, the rate of technical development in the States that were already largely capitalistic became slower and the first of the three alternatives mentioned above was the result. In the present stage of capitalism, on the other hand, when attempts to extend the field of production outside the boundaries of each individual country meet with obstacles of growing difficulty, competition thereby becomes more and more acute and the rate of rationalisation more and more rapid. This tends to make the third of the above alternatives increasingly probable.

The situation may be brought out in a more striking way by

a diagram which clearly shows the characteristic difference between industrial development in the United States from 1900 to 1914 and during the post-war period.

INDUSTRIAL DEVELOPMENT IN THE U. S. A.

(1899 = 100)



Before the war the number of workers employed kept more or less parallel with the increase in the volume of production, while individual output increased at a comparatively slow rate. In the period of prosperity after the war, production in the United States again increased rapidly. At the same time, however, the productivity of labour increased to an extraordinary extent, and consequently the number of workers employed scarcely increased at all and at times even decreased.

Very few investigations have been made into the rate of technical progress and the rate at which labour productivity has increased. Such investigations as do exist show that the rate is incomparably higher at present than it was before the war. An enquiry into American conditions, made by F. C. Mills, was published by the National Bureau of Economic Research under the title: *Economic Tendencies in the United States.* Mills calculates the increase in individual productivity from 1899 to 1914 as being about 1.8 per cent. annually; from 1923 to 1929 it was 3 per cent., and from 1932 to 1935, 4.2 per cent., annually. In Germany the *Vierteljahrshefte des Instituts für*

Konjunkturforschung estimates the annual increase in individual productivity from 1890 to 1913 at from one to 1.33 per cent. In the decade from 1925 to 1935, on the other hand, the average increase in individual output is estimated at from 3.4 to 3.6 per cent. As a result of similar investigations into the improvement in individual productivity in other countries, including Great Britain, Canada, Sweden, and Hungary, the conclusion is reached in the above-mentioned publication that " it is practically certain that the rate of technical progress since the war is several times as rapid as it was before the war ".

It may therefore be said that the conquest of new markets is proceeding much more slowly than before the war. Consequently the workers who lose their employment in one section of production cannot be transferred to the same extent as formerly to the exporting industries, which, before the war, were dealing with a constantly increasing market. The possibility of sending industrial reserves to sparsely populated areas is much slighter than in the decades preceding the war. It is more difficult to export commodities to colonial or semi-colonial territories because these countries have developed industries of their own and a working class of their own. The export of capital, which formerly provided a stimulus to exporting industries, and at the same time tended to reduce the rate of technical progress, has fallen to a very marked extent. As the available new markets are much more restricted, and as at the same time the number of countries fighting for those markets has grown, the competition between them becomes increasingly acute. The capital available for investment is being invested at home to a much greater extent than formerly ; and, as a result, competition on the world market and also at home becomes more and more fierce. The consequence is an increase in the rate of technical progress. The factors that formerly provided a safety valve for the labour market have become immeasurably less effective, and the factors which tend to place an additional burden on the labour market have become incomparably more powerful.

A further conclusion can be drawn. In the decades before the war, when profits were comparatively high, the conquest of new markets produced a favourable situation on the labour market, and therefore, as has been seen, wages rose to an extent which automatically made it possible for large numbers of workers to be employed. At the present time, as a result of the factors analysed above, the situation on the labour market is

much less favourable, and therefore there can be no possibility of a rise in wages on a scale at all comparable with the period immediately preceding the war.

This is no place for an analysis of the trend of real wages in the leading industrial countries. Such a study would lead us too far. But it can be taken as a fact that a rise in wages at all comparable with that which took place between the middle of last century and the beginning of the war in France, the United States, Germany and England (in the last-named country only about the end of the century) is no longer taking place at present. It must be realised that an increase in individual productivity is not necessarily or automatically followed by a rise in the purchasing power of wages. If the increase in labour productivity is accompanied by very unfavourable conditions on the labour market, such as those outlined above, it may quite easily lead to unemployment on a large scale and a simultaneous drop in wages.

III.

The Development of the Foreign Trade of the World and of the Four Most Important Commercial Powers One with the Other

The preceding theoretical argument showed that it was comparatively easy for the industrial workers thrown out of employment by technical progress in the decades proceding the war to find fresh employment in other branches of production. It was found that one of the decisive factors that made this possible was the expansion of world trade during that period. In contrast to that situation, a characteristic feature of post-war development is that the advance into new areas still to be developed on capitalistic lines has become increasingly difficult, and that therefore the rate of progress of world trade has become gradually slower. This argument must now be examined more closely in the light of statistical data.

The development of world trade (expressed in value) before the war was as follows [1]:

[1] All the figures are taken from the 1936 issue of the *Statistisches Jahrbuch für das deutsche Reich*. The German Statistical Office gives the following note concerning the volume of world trade: "Up to 1929 the volume of world trade (valued on the basis of 1913 prices) is taken from the statistics of its value, corrections for price changes being made by means of the selected price index (average of the wholesale trade indexes of the British Board of Trade and the United States Bureau of Labor Statistics); after 1930 (new series) it is calculated from the changes in the volume of the various commodities making up world trade."

VELUE OF WORLD FOREIGN TRADE, 1910-1913
(*Thousand million RM.*)

Year	Europe	Other countries	World total
1900	54.2	28.0	82.2
1905	63.8	37.4	101.2
1913	98.1	62.1	160.2

If the total figure for world trade in 1913 is taken as equalling 100, then the value of European foreign trade during the period under consideration rose from 55.2 to 100, the value of the trade of other countries from 45.1 to 100, and that of the whole world from 51.3 to 100. This implies that from the beginning of the century to just before the war the value of world trade had almost doubled and that of the countries outside Europe had more than doubled. This enormous increase was not due mainly to a rise in prices. Prices did rise during that period, but this was responsible for only a comparatively small fraction of the increase in the value of foreign trade. Even when expressed in terms of volume, foreign trade grew considerably during that period. On the basis of 1913 prices the development in the volume of world foreign trade was as follows :

VOLUME OF WORLD FOREIGN TRADE, 1900-1913
(*Thousand million RM.*)

Year	Europe	Other countries	World total
1900	65.1	33.7	98.8
1905	75.0	44.0	119.0
1913	98.1	62.1	160.2

The index number for the year 1913 again being taken as 100, the increase in the volume of foreign trade was from 66.4 to 100 in Europe, from 54.3 to 100 in other countries, and from 61.7 to 100 for the world as a whole. Although the volume of world trade cannot be said to have doubled during that short period, it increased by more than 60 per cent. It will be obvious that this very marked expansion had an extremely important influence on the markets for industrial commodities and therefore on the employment of workers.

Turning to the post-war period, it will be found that it took several years to bring the volume of world trade up to the 1913 level. On the basis of 1913 = 100, it was not until 1924 that the volume of world trade exceeded this figure, reaching 102.4. The following table shows the subsequent developments in absolute figures.

VALUE OF WORLD FOREIGN TRADE, 1927-1935

(*Thousand million RM.*)

Year	Europe	Other countries	World total
1927	142.2	128.8	271.0
1929	150.0	134.1	284.1
1932	62.9	46.9	109.8
1935	52.1	45.1	97.2

After the war there were exceptional fluctuations in prices, so that both the very marked rise in the world trade figures as compared with the pre-war period and their collapse during the depression must be attributed not so much to a change in the volume of trade as to price movements. The volume of world foreign trade during that period fluctuated as follows (1913 = 100).

VOLUME OF WORLD FOREIGN TRADE, 1927-1935

(*Per cent. of figures for 1913*)

Year	Europe [1]	Other countries	World total
1927	104.2	148.9	121.5
1929	112.0	158.2	129.9
1932	89.1	107.5	96.2
1935	88.3	121.8	101.3

[1] Part of the increase in the European figures must be attributed to the fact that the present statistics of foreign trade contain many operations that were formerly internal trade. As a result of the founding of new States by the Treaty of Versailles, the trade between Austria and Hungary, for instance, now appears in the statistics as foreign trade, whereas formerly this was naturally not the case.

These figures show first of all that it was only during the short period of the boom that the rate of progress maintained throughout the pre-war period could be kept up. They also show that the foreign trade of the world during the depression declined

to an extent unparalleled in any previous depression. Finally, the figures indicate that since 1935 world trade has remained at about the 1913 level. The curve no longer rises sharply as in the decades preceding the war.

At this point it is necessary to deal with the objections of those who follow a different line of argument. In opposition to the view that the rapid development of foreign trade was due mainly to the conquest of new markets it has been, and still is, contended that just because of the growing differentiation in industrial development the foreign trade relationships between the more important commercial countries have extended rather than lessened. It is said that these countries are becoming increasingly good customers for each other, and that therefore the more important commercial countries could possibly find in their increased mutual trade a substitute for the lost possibilities of expansion in other directions. The fact that this is not the case to any marked extent at present is alleged by the supporters of this theory to have nothing to do with natural economic laws, but to be a consequence of the difficult political situation. Once the political clouds have disappeared somewhat from the horizon the volume of trade between the important countries of the world could, they assert, easily be increased to an enormous extent, and thus lead to a further period of fruitful commercial development.

The present writer considers that this argument is entirely fallacious. The foreign trade of the important commercial countries with each other is not increasing but is decreasing steadily from decade to decade. Lest he be accused of selecting exceptional years in support of his view, the author has appended figures showing the foreign trade of the four most important commercial countries with each other from 1900 onwards. Even before the war it will be seen that the percentage of foreign trade of those four countries with each other was falling to a considerable extent. The reason why this fact was not so strikingly evident at the time is that, as a result of the great increase in the absolute figures for world foreign trade, the relative decrease in the foreign trade of those four countries with each other might, and frequently was, accompanied by an increase in the absolute figures. It should further be noted that the commerce between those four countries is all the greater when the proportion of finished articles in their export trade is small. This can be seen from the following figures, which show the proportion of finished articles as a percentage of the total exports of

these four countries and of the exports of each to the other three in 1913.

Country	Percentage of finished articles	Percentage of exports of each country to the other three
Great Britain	78.4	18.9
Germany	66.5	29.2
France	60.8	40.1
United States	32.0	43.8

After the war, on the other hand, the continued decline in the percentage of the foreign trade of these four countries with each other was accompanied by a very marked decline in the rate of increase of world trade as a whole and by an actual decrease during the depression (cf. p. 471). During that period, therefore, the decrease in the foreign trade of those four countries with each other was absolute and not merely relative. Detailed proof of this for each of the four countries in question will be found in the appendix.

The two following tables will bring out more clearly the foreign trade relationships between those four countries from 1900 onwards.

EXPORTS OF EACH ONE OF FOUR IMPORTANT COUNTRIES TO THE OTHER THREE

Country	1900 [1]	1913	1927	1935
	Per cent.	Per cent.	Per cent.	Per cent.
United States	57.0	43.8	31.9	28.1
Great Britain	21.6	18.9	16.5	13.8
Germany	33.7	29.2	22.5	18.8
France	46.3	40.1	36.6	21.8

[1] Average for the years 1901 to 1905.

IMPORTS OF EACH ONE OF FOUR IMPORTANT COUNTRIES FROM THE OTHER THREE

Country	1900 [1]	1913	1927	1935
	Per cent.	Per cent.	Per cent.	Per cent.
United States	37.2	34.3	17.4	14.2
Great Britain	40.1	32.6	27.5	17.9
Germany	32.7	29.8	25.5	16.3
France	32.5	36.6	33.5	24.3

[1] Average for the years 1901 to 1905.

In 1935, has as already been mentioned, the volume of world trade had reached approximately the 1913 level. But from 1913 to 1935 the exports of the United States to the other three countries fell from 43.8 to 28.1 per cent., those of France by almost half, those of Germany from 29.2 to 18.8, and those of Great Britain from 18.9 to 13.8 per cent. In the case of imports those of the United States had declined from 34.3 to 14.2 per cent., those of Great Britain from 32.6 to 17.9 per cent., those of France from 36.6 to 24.3 per cent., and those of Germany from 29.8 to 16.3 per cent.

It is certain that if some of the years are considered separately, factors will be found to have been at work which were only of a temporary character ; but the general trend of this development right from the beginning of the century up to 1935 is unmistakable. The foreign trade of the leading industrial States with each other has declined steadily from decade to decade.[1] It should further be pointed out, in order to meet an obvious objection, that this decline in the foreign trade of those countries with each other was much greater than the simultaneous decrease in the share which each of the countries had in the total trade of the world. This share has also decreased (in the United States from 11.5 per cent. in 1900 to 10.9 per cent. in 1935 ; in Great Britain, from 18.7 to 14.1 per cent. ; in Germany, from 12.6 to 8.7 per cent. ; and in France from 8.7 to 6.2 per cent.) As the figures show, the decline in the share of those four countries in the total trade of the world was much slower than that in their foreign trade with each other. The answer to the argument that the ground lost as a result of the reduced opportunities for conquering new markets can be made good by more intensive foreign-trade relationships between the various countries is that the figures from the beginning of the century up to the most recent years prove precisely the reverse. The foreign trade of those four countries with each other has declined irresistibly. This was due, not to temporary factors, but to the operation of an age-old and inflexible law. Just as in the course of the capitalist process the economic systems of the highly industrialised States, in spite of historical and national differences, tend to become more and more alike, so also their

[1] Naturally there was a corresponding increase in the proportion of their trade with countries which were not so highly industrialised. But, as the development of Japan and Italy, for example, has shown, a stage is eventually arrived at where the countries which were formerly less highly industrialised become the most serious competitors of the older commercial countries on the world market.

exports take on a certain similarity ; and they therefore become less important customers for each other, although the absolute figures for their commercial dealings one with the other may still be comparatively high.

The slackening in the rate at which new markets can be obtained thus coincides with the decline in the foreign trade relationships of the older industrial countries with each other. That explains the acuteness of the struggle to obtain new markets, to which reference was made above. This brings us to a further stage in the analysis, namely, the probable future developments.

IV.

Slackening of the Rate of Rationalisation Improbable

The question is often asked whether the rate of rationalisation in the leading highly-industrialised countries is likely to become slower in the near future. There is no reason to suppose that it will.

Readers may be referred to what was said earlier (cf. p. 456) about the reduced opportunities for finding new markets at the present day. If the arguments there given are correct, competition on the world market is likely to become more acute rather than less. The available statistical data for recent years bear out this view.

Reference has already been made to the increase in the productivity of labour in Germany during the last decade. It was found that in general the increase in individual output from 1925 to 1935 proceeded much more quickly than in the pre-war years. It will be of interest to analyse this rise in productivity in more detail. According to the article already quoted from the *Vierteljahrshefte des Instituts für Konjunkturforschung*, labour productivity in Germany developed as shown in the table on page 476.

These figures confirm the general experience that in periods of depression the production per working hour increases appreciably. In one depression year, 1926, the productivity of labour increased by 7.1 per cent., and in others—1930, 1931, and 1932—by 7.5 per cent., 4.8 per cent., and 3.8 per cent. respectively, making a total increase of as much as 16.1 per cent. in those three years alone.

---

[1] Vol. 11, 1936, No. 2, Part A, p. 133.

LABOUR PRODUCTIVITY IN GERMAN INDUSTRY : ESTIMATES OF THE "INSTITUT FÜR KONJUNKTURFORSCHUNG"

Year	Industrial production (1928 = 100)	Number of hours worked by industrial workers [1] (1928 = 100)	Production per worker	
			1928 = 100	Annual percentage increase or decrease [2]
1925	82.9	90—92	90—92	—
1926	76.3	78—79	97—98	+ 7.1
1927	96.3	97	99	+ 1.5
1928	100.0	100	100	+ 1.0
1929	100.1	94	106—107	+ 6.5
1930	87.0	76	114—115	+ 7.5
1931	70.1	58—59	119—121	+ 4.8
1932	58.0	46—47	123—126	+ 3.8
1933	65.7	51—54	123—129	+ 1.2
1934	82.9	65—71	117—127	— 3.2
1935	95.8	73—77	125—131	+ 4.9

[1] In this and the following column, two figures are sometimes given, because the number of industrial workers concerned can be estimated only with a certain margin of error.
[2] Calculated on the basis of the average figures.

It may be asked why the productivity of labour should increase during the depression. Even during such a period, rationalisation measures are naturally taken, but as a rule they are not the decisive factor in this development. That is true in general, and it is true also for the special situation of the German economic system during the world depression. The main reason why it was possible to increase the productivity of labour in Germany to such an extraordinary extent at that period was that production fell off so tremendously—dropping to half the normal in many industries—that numerous old-fashioned and badly equipped undertakings were temporarily or permanently closed down, because the modern rationalised undertakings, with better machinery and equipment, were able to satisfy the reduced demand. Theoretically, therefore, the demand for commodities could be met without any need for rationalisation measures because of the great increase in the average productivity of labour as compared with the years before the depression. If in any economic system the reduced demand during a depression can be satisfied by the most modern undertakings, the average productivity of labour increases without any technical changes being required in those undertakings. In order to avoid any misunderstanding, it should be pointed out again that there is no suggestion that rationalisation measures did not continue to be applied during the depression.

According to the estimates of the *Institut für Konjunktur-*

forschung, the productivity of the workers per working hour rose on the average by from 3.4 to 3.6 per cent. annually, during the years 1925-1935. After production had reached its lowest point in Germany, in 1932, there was no increase in the productivity of labour for two years. In 1933, productivity per working hour rose by only 1.2 per cent., and in 1934 it actually fell by 3.2 per cent. Quite apart from the unusual conditions under which Germany was working during those years, this cessation of the increase in productivity was undoubtedly due largely to the fact that when production again began to increase, many of the old-fashioned, badly equipped undertakings which had been closed down during the depression had to be reopened in order to meet the demand. In 1935, production per working hour rose again by as much as 4.9 per cent. At the end of that year, the average productivity per worker in the German economic system as a whole was higher than in 1932, which implies that the rate of individual output which had been obtained in the most highly rationalised undertakings at the end of the depression had not only been reached as an average for the whole of German industry by 1935, but had even been exceeded.

The same is true of the United States, where the average output per working hour in industry at the end of 1935 was far higher than the average during the depression.

The recent very rapid rate of increase in individual productivity, in technical progress and in the application of rationalisation—all of which, after all, are only different aspects of the same process—is sufficient to refute, if any refutation is necessary, the argument so frequently advanced that the development of modern industry in the direction of monopolies, cartels and trusts tends to retard technical progress. Such a view was more or less admittedly the basis of the argument that it was competition which led to the improvement of industrial methods and the adoption of more modern and intensive processes, so that the restriction of competition would at least reduce, if it did not altogether remove, the necessity for further technical advances. Such a view, as recent developments show, is a wholly mistaken one. Statistical evidence is sufficient to show that the argument is entirely fallacious. There has hardly been any period during the development of our modern economic system in which monopolies, cartels and trusts have developed so rapidly as in the post-war years. At the same time, as has been seen, there

has been no period hitherto in which technical progress was so great, the rate of rationalisation so high, and the increase in the productivity of human labour so marked.

It is also possible to show from a theoretical standpoint that the increased tendency towards monopolistic forms of organisation does not, with rare exceptions, tend to reduce the speed of technical progress. For instance, the existence of a cartel in the coal-mining industry by no means does away with the necessity for the investment of new capital. Cartels, trusts and monopolies do not destroy competition, which merely becomes latent. There is the competition of persons outside the trust in the same country, the competition of organisations with a monopoly outside the country, and, in addition, the competition of other commodities which to some extent can be used as a substitute for the product of which a monopoly is held. Take, for example, coal. Its present-day competitors are oil, to some extent wood, electrical power, etc. In other words, substitutes can be found for coal in many of its uses. What is true of coal is true of every commodity of importance in an economic system. A coal trust in any given country must therefore meet the competition not only of coal trusts in other countries, but also of oil, wood and electricity. If technical progress in the production of any of those proceeds more rapidly and more intensively than it does in the production of coal, then the coal trust is likely to lose part of its market to the competing product. Unless there is a general trust controlling all products in all countries, an organisation holding a monopoly is not protected against competition, but must meet it from a different quarter. So long as the organisation with the monopoly is faced by competition—acting, it is true, in another way than so-called free competition—the necessity remains for the accumulation of fresh capital, and therefore for rationalisation and a continued increase in the productivity of human labour.

Another factor which makes this tendency stronger at the present time is the armaments race. Any attempt to trace even a brief outline of the political situation in the world would be out of place here. All that can be referred to is the influence of that situation on the present problem of rationalisation and on prolonged unemployment. The world war was a war of massed troops, a war of industry. In the years preceding the war, however, industrial preparation for war played quite an unimportant part. Everyone knows how little preparation had

been made in this direction. It will suffice to mention one of many characteristic facts : it was not until the war had actually started that Germany, at the suggestion of Walter Rathenau, took systematic measures to organise the supply of raw materials.

The situation to-day differs from that before the war in many respects. In every country the armaments industry in its various branches covers an increasingly large section of industrial production. Coal mining, the production of iron and steel, oil, all the metal industries, the chemical industry, engineering, motor-car manufacturing, etc., will all be directly required for war purposes if war should break out ; and the majority of the industries not working directly for the production of war materials will be very strongly influenced indirectly.

The next question to be raised is : what effect will this situation have on the problem under consideration ? In general it may be said that any State which wishes to be superior to its competitors in production for military purposes must be their industrial superior. If a country wishes to lead in the production of guns and ammunition in a future war, it must also lead in the production of iron and steel. If it wishes to build the best tanks, it must be the best manufacturer of motor-cars. In other words, if, for certain historical or other reasons, the rate of rationalisation has remained relatively low in certain countries, it is now being speeded up to a very marked extent at present by the fact that in any future war no State can afford to lag behind the others in rationalisation—that is, in technical progress in those branches of production that are important for war purposes. Consequently the development of armaments speeds up rationalisation in all the industries that are of military importance. Just as in every national economic system the industries that would be of value in the event of a future war have expanded tremendously at the present time, so also the speeding up of rationalisation as a result of the armaments race covers an increasingly large section of the economic system.[1]

[1] This process is accentuated by three groups of factors. During the war of 1914-1918 it was found that there were three main tasks to be fulfilled :

(1) The provision of the most necessary commodities for the civilian population.

(2) The greatest possible increase in the direct production of war materials.

(3) The constitution of the largest possible army from among those fit for military service.

It was impossible to fulfil all those tasks completely at the same time. In all the belligerent countries during the war, millions of men fit for service were not employed as soldiers because their work was essential for the production of war

We must not allow ourselves to be led astray as to the consequences of this development by the fact that, at present, when every country is feverishly arming and production is increasing practically everywhere, there has been a slight decrease in the unemployment figures. That is merely a temporary phenomenon. We cannot but agree with the remark made by Mr. Butler in his Report to the Twentieth Session of the International Labour Conference (Geneva, 1936): " In so far as industrial prosperity is founded on warlike preparation, it is not only sinister but hollow and unreal ".

If our hopes are fulfilled and the present world armament race does not lead to war, it will comparatively quickly be plain that the present development of armaments has not solved the old problems arising out of the rate of rationalisation combined with a shrinkage in the available new markets, but that they have only been temporarily set aside and are waiting to return with increased force.

The world can never return to the position in which it formerly stood, more especially in the decades immediately preceding the war, when a relatively slow rate of technical progress went hand in hand with the triumphant spread of capitalistic methods of production everywhere and when the relatively favourable situation on the labour market, combined with the high rate of profits, led to a steady rise in wages over a long period. To-day less than ever can the workers' conditions of employment and living improve automatically. It is therefore necessary to draw the logical conclusion from the facts and to use the power of the workers' organisations to secure for the workers what they obtained more or less automatically in times gone by.

---

materials. In every country the civilian population had to suffer certain privations, although, of course, the difficulties varied in extent in different countries. In every country also the production of raw materials frequently fell short of military requirements. If another war should come, the same three tasks will have to be fulfilled, although in a more acute or a modified form. Every country will try, as far as possible, to harmonise those three requirements. It is here that rationalisation plays an extremely important part. The more a country succeeds in making technical progress and increasing the productivity of human labour, the easier it will be for it to send millions of men to fight at the front (millions who, economically speaking, are non-earners) and at the same time to produce the necessary war materials and provide for the needs of the civilian population. Some countries have already organised 'shadow' factories, which are not intended to work in peace time, but provide a reserve of producing capacity, to be utilised in the event of war.

APPENDIX

The Foreign Trade of Four Important Countries (Great Britain, France, Germany and the U.S.A.) with Each Other from 1900 to 1935

Foreign Trade in the Pre-War Period[1]

UNITED STATES : EXPORTS TO THE OTHER THREE COUNTRIES BEFORE THE WAR (AS A PERCENTAGE OF SPECIFIC EXPORTS)

Period	Germany	Great Britain	France	Total
1901-1905 [1]	13.4	38.3	5.3	57.0
1906-1910 [1]	14.2	31.5	6.2	51.9
1913	13.5	24.4	5.9	43.8

[1] In order to avoid having a single year as a basis for comparison, the average for the first five years of the century has been taken in each case.

UNITED STATES : IMPORTS FROM THE OTHER THREE COUNTRIES BEFORE THE WAR (AS A PERCENTAGE OF TOTAL IMPORTS)

Period	Germany	Great Britain	France	Total
1901-1905 [1]	11.3	17.3	8.6	37.2
1906-1910 [1]	11.2	16.7	8.6	36.5
1913	10.4	16.3	7.6	34.3

[1] Average for five years.

GREAT BRITAIN [1] : EXPORTS [2] TO THE OTHER THREE COUNTRIES (AS A PERCENTAGE OF BRITISH SPECIFIC EXPORTS)

Period	Germany	France	United States	Total
	By countries of shipment.			
1895-1899 [3]	9.4	5.9	8.6	23.9
1900-1904 [3]	8.4	5.8	7.4	21.6
	By consignments			
1905-1909 [3]	9.0	5.5	7.1	21.6
1910	8.6	5.3	7.3	21.2
1913	7.7	5.6	5.6	18.9

[1] Certain statistical difficulties arise as a result of the change in the method of compiling statistics of British foreign trade in 1905. After that date British foreign trade is shown by consignments instead of by countries or ports of shipment. In spite of this, the trend of development is clear. [2] Home produce. [3] Average for five years.

[1] The figures are taken mainly from: *Der Kampf um den Weltmarkt*, Handelsstatistiches Material. Published by the Institut für Weltwirtschaft und Seeverkehr, of Kiel University. Edited by P. Hermberg, Jena, 1920.

GREAT BRITAIN : IMPORTS FROM THE OTHER THREE COUNTRIES
(AS A PERCENTAGE OF BRITISH SPECIFIC IMPORTS)

Period	Germany	France	United States	Total
	By country of shipment			
1900-1904 [1]	6.2	9.6	24.3	40.1
1905-1909 [1]	6.3	8.5	25.2	40.0
1910	6.1	7.6	17.7	31.4
1913	6.6	7.2	18.8	32.6
	By consignments			
1904-1905	10.1	8.4	22.1	40.6
1913	11.6	6.3	19.8	37.7

[1] Average for five years.

GERMANY : EXPORTS TO THE OTHER THREE COUNTRIES BEFORE THE WAR
(AS A PERCENTAGE OF GERMAN SPECIFIC EXPORTS)

Period	France	Great Britain	United States	Total
1901-1905	5.3	19.3	9.1	33.7
1906-1910	6.8	15.6	9.0	31.4
1913	7.9	14.2	7.1	29.2

GERMAN IMPORTS FROM THE OTHER THREE COUNTRIES BEFORE THE WAR
(AS A PERCENTAGE OF GERMAN SPECIFIC IMPORTS)

Period	France	Great Britain	United States	Total
1901-1905	5.6	11.9	15.2	32.7
1906-1910	5.8	9.5	15.1	30.4
1913	5.8	8.1	15.9	29.8

FRANCE : EXPORTS TO THE OTHER THREE COUNTRIES BEFORE THE WAR (AS A PERCENTAGE OF FRENCH SPECIFIC EXPORTS)

Period	Great Britain	Germany	United States	Total
1901-1905	28.2	12.1	6.0	46.3
1906-1910	23.0	12.4	7.3	42.7
1913	21.3	12.6	6.2	40.1

FRANCE : IMPORTS FROM THE OTHER THREE COUNTRIES BEFORE THE WAR (AS A PERCENTAGE OF FRENCH SPECIFIC IMPORTS)

Period	Great Britain	Germany	United States	Total
1901-1905	12.4	9.5	10.6	32.5
1906-1910	13.8	10.8	10.6	35.2
1913	13.3	12.7	10.6	36.6

Post-War Developments

UNITED STATES : EXPORTS TO THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935 [1]

Period	Germany	Great Britain	France	Total
1913	13.5	24.4	5.9	43.8
1927	9.9	17.3	4.7	31.9
1932	8.3	17.9	7.0	33.2
1935	4.0	19.0	5.1	28.1

[1] Percentages calculated from the absolute figures published in the *Statistisches Jahrbuch für das Deutsche Reich* (1936), p. 132.

UNITED STATES : IMPORTS FROM THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	Germany	Great Britain	France	Total
1913	10.4	16.3	7.6	34.3
1927	4.8	8.6	4.0	17.4
1932	5.6	5.6	3.4	14.6
1935	3.8	7.6	2.8	14.2

GREAT BRITAIN : EXPORTS TO THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	Germany	France	United States	Total
1913	7.7	5.6	5.6	18.9
1927	6.2	3.5	6.8	16.5
1932	4.0	5.1	4.2	13.3
1935	4.5	3.9	5.4	13.8

GREAT BRITAIN : IMPORTS FROM THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	Germany	France	United States	Total
1913	6.6	7.2	18.8	32.6
1927	5.1	5.4	17.0	27.5
1932	4.3	2.7	11.9	19.0
1935	4.0	2.9	11.1	17.0

GERMANY : EXPORTS TO THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	France	Great Britain	United States	Total
1913	7.9	14.2	7.1	29.2
1927	4.4	10.9	7.2	22.5
1932	10.0	7.8	4.9	22.6
1935	6.1	8.8	4.0	18.8

GERMANY : IMPORTS FROM THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	France	Great Britain	United States	Total
1913	5.8	8.1	15.9	29.8
1927	4.2	6.6	14.7	25.5
1932	6.0	5.5	12.7	24.2
1935	4.3	6.2	5.8	16.3

FRANCE : EXPORTS TO THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	Great Britain	Germany	United States	Total
1913	21.3	12.6	6.2	40.1
1927	18.4	11.7	6.5	36.6
1932	10.0	8.6	4.8	23.4
1935	10.4	6.8	4.6	21.8

FRANCE : IMPORTS FROM THE OTHER THREE COUNTRIES IN 1913, 1927, 1932 AND 1935

Year	Great Britain	Germany	United States	Total
1913	13.3	12.7	10.6	36.6
1927	12.2	8.0	13.3	33.5
1932	8.3	12.1	9.7	30.1
1935	7.5	8.3	8.5	24.3

The Use of Office Machinery and its Influence on Conditions of Work for Staff

The mechanisation of office work, which may be regarded as the most recent phase of the development of mechanisation in general, constitutes one of its most interesting aspects. The invasion of the machine into a territory where its use was almost unknown has had consequences not only of a technical but also of a social nature. In the first place, conditions of work of office staffs have been profoundly modified. On the other hand, by creating large numbers of simple jobs which do not call for great muscular effort, the machine has contributed largely to the extension of the field of women's work. Furthermore, the use of machines in offices, which makes possible the performance of an ever-increasing amount of preparatory and supervisory work, acts as a powerful aid to rationalisation of undertakings.

This particular aspect of mechanisation attracted the attention of the Advisory Committee on Management set up by the Governing Body of the International Labour Office in 1936. The question was placed on the agenda of the Committee's second meeting, held in May 1937, when cognisance was taken of the following report, prepared by the International Labour Office.

Introduction

IN THE investigation of office work, as in many other fields, mechanisation is readily confused with rationalisation. This article deals with mechanisation alone.

It is as well that this should be made quite clear at the outset. Mechanisation necessarily involves certain preliminary operations and consequences which cannot themselves be described as mechanisation but are so closely connected with it that they will have to be mentioned here ; while on the other

hand, certain features of the rationalisation of office work are purely a matter of organisation and cannot be dealt with. Such features are: the re-grouping of processes which were previously carried out at different points or by different employees; the elimination of unnecessary operations or of duplication; certain forms of simplification which are purely intellectual and in no way connected with technical processes; and finally measures of co-ordination which are designed to direct the work of the office as a whole towards a definite purpose.

There are at least two differences between the mechanisation of office work and that of workshop operations. The former is of more recent growth and its economic and social consequences are substantially different. Moreover, when one considers the definition of mechanisation given by the Institute of Intellectual Co-operation and the International Labour Office in their *Enquiry into Mechanisation in the Modern World*, one finds that, while this definition accurately describes the effects which have attended the introduction of machinery into industry, it is incomplete in respect of office work. " Mechanisation consists in supporting, reinforcing, supplementing and replacing organic by mechanical processes. It thereby permits of increasing the quantity and variety of products and the speed at which these are produced. Its effects are to intensify and standardise life. " If the words " organic processes " are to be taken to mean the physical processes performed by men and animals, the definition is incomplete. In the mechanisation of office work, automatic processes have been carried so far that in many cases the human mind itself is replaced by a machine, so much so that the producers of a certain calculating machine have with some justification been able to base their publicity on the slogan: " A steel brain ". It would, therefore, be more correct to say that in office work mechanisation consists in supporting, reinforcing, supplementing and replacing organic and *mental* processes by mechanical processes.

The notion of mechanised mental work suggests another which will prove useful for the purposes of this article. Several writers have described office work as consisting in the preparation and handling of documents. This view is somewhat too simple and restricted. A distinction must be made between two sets of factors in office work, namely, documents and the information contained in these. Some operations, such as transmission and selection, are performed on documents, these

being treated as indivisible units. A far greater number of operations, which come under such headings as analysis, calculation, etc., and are far more complicated, are performed on the information contained in the documents. The distinction is significant, for when the mechanisation of office work was as yet in a rudimentary stage the mechanical equipment used could deal only with documents ; but in recent years a great many machines have become available which perform complicated operations with data ; in other words, these machines can break up documents and prepare others from the fragments. Combined sorting and tabulating machines are an outstanding example of this kind of equipment. Of these it may truly be said that they perform what had previously been considered as essentially mental operations, albeit of an elementary kind.

A logical classification of office machinery would therefore have to be based on this distinction between documents and the information they contain. A classification of this kind will be found in the following section.

Classification of Office Machinery

1. *Machines for preparing and producing documents by recording data :*

Dictaphones, stenotyping machines, tabulators ; addressing machines ; cash registers, book-keeping machines ; punching machines used in connection with sorting and tabulating machines ; cheque writers ; machines for printing tickets.

2. *Duplicating machines :*

(*a*) based on photographic or similar processes (using emulsions sensitive to light) ;

(*b*) based on printing processes (using ink on non-sensitised paper).

3. *Machines used for analysing data :*

Sorting machines used in connection with tabulating machines, certain book-keeping machines.

4. *Machines performing calculations with data :*

Calculating machines, book-keeping machines, tabulating machines, cash registers, coin counters.

5. *Equipment for transmitting messages:*

(*a*) verbal messages: telephones, speaking tubes;

(*b*) documents: document lifts, chutes and gravity conveyors, overhead conveyors, mono-rail conveyors, belt conveyors, pneumatic tubes.

6. *Equipment for filing and finding documents:*

Visible card indexes, card tabs and signals, perforated or slotted card indexes.

7. *Auxiliary equipment:*

Machines for opening mail, franking machines, clipping machines, automatic dating and clock-stamping machines, pencil sharpeners, etc.

The distinction which has been drawn between documents and the information they contain brings out the difference between two operations which are sometimes confused, namely, selection and analysis.

Selection consists in withdrawing a document or group of documents from a series, whereas analysis consists in extracting information from a document with a view to re-grouping it in various ways.

Technical Changes which have Attended the Mechanisation of Office Work

It would seem at first sight that a distinction might be drawn — as has been done by many writers who have dealt with mechanisation in general — between causes and effects in the mechanisation of office work, especially as the phenomena which might be considered as causes are more often connected with general economic conditions and the internal economics of the undertaking, whereas those which appear to be effects are of a social kind. Such a distinction, however, begs the question; for, when considering the progress of mechanisation, whether in office work or elsewhere, it is extremely difficult to distinguish clearly between the cause of a change and its result. For instance, to take what would at first sight undoubtedly seem to be a consequence of mechanisation, namely the increased speed at which work is performed, a little thought will show that it is impossible to decide how far speed is an

external requirement which the machines have been designed to meet, and how far it is a result of the progress of mechanisation.

It would therefore seem more scientific to describe these various kinds of facts as " changes attending the progress of mechanisation " and simply to classify them under two headings, technical and social, without attempting to decide whether they are causes or effects. It would indeed be better to bear in mind that they are both causes and effects and that they influence each other in many different ways.

Before more detailed consideration is given to the changes which have attended the mechanisation of office work, one general comment is called for. In some undertakings (administrative services, banks, insurance companies) office work is the main activity, and the aim of reorganisation is therefore to reduce the cost of that work to a minimum. But in the case of industrial and commercial undertakings the purpose is to reduce expenditure not so much in relation to the operations performed in the office itself, but rather in relation to the work done by the undertaking as a whole. It may happen that in a reorganised and mechanised office the unit cost, both in money and in effort, of the work done may be higher than before reorganisation. If, however, the output of the undertaking as a whole has improved, the end in view has been attained.

That is why the mechanisation of office work has developed to an extent which may seem excessive but which in most cases corresponds to the real needs of the undertaking. For instance, it has been found that the average value of office equipment per employee in the United States amounts to 1,800 gold francs. This shows how very highly mechanised some offices must be, particularly when allowance is made for the fact that in a great many, even in that country, equipment is still rudimentary.

The main features of the technical changes which have attended the mechanisation of office work are the following :

(1) A high degree of division of labour, involving, in the case of many employees, the performance of elementary and uniform operations which are repetitive and fairly monotonous. The degree of uniformity of the work depends on its organisation, but also to an appreciable extent on the mechanical appliances used. For instance, certain book-keeping operations, and especially those involving analysis, may be carried out

with book-keeping machines or sorting and tabulating machines. When book-keeping machines are used, although the work is repetitive and done at great speed, the operator often still has to do a certain amount of thinking to decide how he will post the entries. On the other hand, although the operations performed on the punching machines of a sorting and tabulating battery are often far more complicated than those carried out on book-keeping machines, the work of the operator is more monotonous, for all he has to do is to depress the key levers corresponding to the figures marked on the documents.

Moreover, a distinction must be drawn in the case of all machines, and particularly in that of office appliances, between three degrees of mechanisation : certain machines only facilitate part of some complicated work (for instance, the calculating machines used by a cashier) ; others are used continuously, but the operator really directs them after having thought out certain details of the performance ; yet others are merely supplemented by the operator, the latter himself working mechanically. When typing, for instance, a typist is to some extent free to decide how to set out the type, but the operator of an addressing machine is, so to speak, merely a cog in the machine.

(2) A considerable increase in the speed at which operations are performed, This is due both to improvements in the design of equipment and to more mechanical work on the part of the operator.

(3) Standardisation of methods of work, the size of forms and the ways in which these are set out. This movement has naturally spread, since the operations have to be performed on a fairly limited variety of machines, which in spite of any improvements cannot be as flexible as a human brain. Standardisation has been one of the main factors in speeding up and simplifying work. It also facilitates the transfer of work from one operator to another, while new operators can be rapidly trained.

(4) Considerable improvement in the methods of preparing and supervising office work. In a great many cases mechanisation has been the direct cause of such improvement.

Division of Labour

Division of labour in offices has passed through several stages, similar to those which have occurred in factories.

Until the last quarter of the nineteenth century, this division was based on the qualifications of the staff. Large offices had clerks, book-keepers, assistants, copyists, and messengers, who covered a wide but strictly limited field of work. It may even be said that such a division of labour was more general in offices than in factories; at that time many workers still did all the operations necessary for the manufacture of a single object, whereas it has always been difficult to find office employees capable of performing all the operations of an office. But this specialisation did not eliminate a considerable degree of variety in an employee's functions: a book-keeper, for instance, would keep the day-book or ledger during part of his time, and devote part or all of the rest to drawing up invoices; often enough he also acted as cashier.

Since the growth of the big administrative departments, public and private, and the rise of the large stores, division of labour in offices has changed its character. The specialised unskilled employee, rapidly prepared for simple operations by means of a hurried training, has appeared in offices. It is sufficient here to cite only one example and to recall that in most big stores the post is opened and sorted by secretaries, that it is read and the replies briefly indicated by managers or heads of departments, and that these replies are dictated by specialised correspondents, typed by typists, and subsequently folded, put in envelopes and stamped by staffs of girls whose habitual work this is. The division of labour in offices thus often preceded mechanisation, for which the ground was prepared in advance. Nevertheless, in the last twenty years mechanisation has certainly speeded up this trend. Staffs are more and more clearly divided into "executives" on the one hand—persons who make the decisions and organise and supervise the work—and a mass of subordinates on the other hand, whose functions less and less justify their classification as brain workers. The process of registering and classifying a book-keeping operation, the whole of which used to be entrusted to a single employee, now requires the participation of no less than five persons if statistical machines are used; there are the responsible employee, who decides how the operation in question can be carried through with the machinery at his disposal, the copyist who makes out the preliminary statement, an operator to punch the card, a person in charge of the sorting machine, and another in charge of the tabulator. Indeed, the duties in connection

with each of the two last machines are often divided between two persons—one to feed the cards in, and the other to supervise.

On the whole, the task of each of these persons is still somewhat more complex than those manufacturing operations in which the division of labour has been carried very far ; but it is at least as monotonous, for the office employee is neither encouraged by the feeling that he is creating something, nor kept interested by the little variations which the manual worker continually finds in the material he is shaping.

Increase in Speed of Operations by Improvements to Machines

No lengthy description of the machines themselves will be given in this section, which must be confined to general considerations concerning the improvements made.

Writers on the subject have already pointed out how valuable it would be to carry further the psycho-technical study of office machinery, with a view to adapting the machines better to the physiology of the worker and so to increasing output and diminishing fatigue. It must be admitted that this vast problem, which arises in the workshop no less than in the office, has not yet found any satisfactory general solution. Much more, indeed, has been done to adapt the worker to the machine than the machine to the worker. It should, however, be noted that the keyboards of typewriters and book-keeping and calculating machines have been studied with a view to minimising the movements of the worker's fingers and hands. The position of the auxiliary levers which return the carriage, change the line, add the figures entered, etc., have also been improved and a typewriter was recently placed on the market in which the stiffness of the keys can be adapted to each typist's individual stroke. As regards statistical machines too, it was for the convenience of the worker that the horizontal sorter with drawers side by side has been substituted for the vertical sorter with drawers one above the other : the employee can now supervise the whole apparatus without having to rise to his feet or stand on a stool.

The most typical advance in this field is the growing use of electric motors to drive machines. The only physical activity required of the employee is often now that of setting up the necessary contacts ; and the consequent saving in effort and in

speed is very great. Many machines which formerly used up the operator's whole nervous strength—cash registers, typewriters, book-keeping machines, punches for statistical purposes, etc.—are driven by electricity. These machines are often supplemented by auxiliary appliances, which also work automatically: tabulators, devices for returning the carriage, changing the space between lines, inserting paper or cards, etc.

Various devices exist for permitting two or more operations to be carried out at the same time. For instance, accounting machines with multiple recording devices can give a number of results simultaneously. Similarly, the coupling of certain appliances enables various entries to be made at once, which are not mere copies of each other (as is the case when carbon paper is used) but which differ in form and can, therefore, be used for different purposes. In this way a typewriter and an accounting machine can be used together, and an accounting machine or cash register can be used along with a statistical machine, etc. There are also types of calculating and accounting machines with devices for drawing attention to mistakes in the operations by a stoppage of the mechanism or by a sound or light signal. In this way the work is done and checked at the same time, which is another method of carrying out two operations simultaneously. Motorisation has also extended to the devices which feed documents to machines and remove them when the operation is complete. Duplicating machines have been fitted with automatic feeds, similar to those used in printing workshops; and addressing, folding, stamping, envelope-closing, and statistical machines are also often fitted with such devices (chutes, moving belts, grips, suction apparatus, etc.) which reduce the work of the employee to that of simple supervision and make the speed of the machine independent of physical considerations. If many documents of uniform dimensions are to be prepared on a typewriter or book-keeping machine, the latter is fed with continuous bands of paper, with strips of carbon paper arranged between them in advance. The bands are placed ready for use, either on a roller or folded in special baskets, and the employee puts one end into his machine at the beginning of the work and can then leave the feeding to itself. It is not until the documents have been prepared that they are cut to the required length.

Lastly, the importance in this respect of the wider use of mechanical transmission equipment should not be under-

estimated. Reference need only be made here to those which save employees engaged at research work in very extensive record installations from having to move about unaided. Equipment of this sort is used in big public and private insurance offices, in the supervision departments of railways, supervising the movement of rolling-stock, etc. In some cases the employee can bring the drawer which he requires antomatically to his place, simply by making the necessary contacts ; in others, on the contrary, the employee's seat can be moved horizontally and vertically in front of the drawer shelves.

It is impossible to say how far each of these factors has influenced the speed of operations. Moreover, it is clear that the acceleration varies widely according as the apparatus is of an auxiliary nature and used intermittently during the day, or is in continuous service.

In the case of intermittently used machines, the increase in speed is unmistakable, but not very great. In the Swiss Post Office, for instance, it was found that the use of machines in the postal-cheque service permitted each employee to do an average of 109,000 accounting operations in the year 1930, as against 78,000 in 1922, when the machines had not yet been introduced.

The more automatic the operation, the more pronounced is the increase in output. Previously, an employee addressing envelopes by hand could not do more than 500 in a day's work ; a hand-worked addressing machine can print 1,000 addresses in an hour, and the number rises to 1,500 for machines worked by the foot and 2,500 for those actuated by electric motors, or even 10,000 in the case of special work for which the machine has been prepared. To take another machine of the same sort, an automatic letter-opener may reach an output of 100 to the minute.

Clearly, the speed reaches its maximum on machines which are the most completely automatic. A punching machine for statistical purposes, for instance, can punch 100-3,000 cards in the hour, its speed depending on the dexterity of the operator ; the sorting machine can sort 20,000 cards, and the tabulating and printing machine can register 5,000 operations, in the same time.

This development of mechanical appliances has had a very important influence on the methods of organising undertakings. It is now possible to enter and check a much larger number of

items with extremely little risk of error ; the results are obtained very rapidly, and the management is thus able to take any necessary action in good time.

Standardisation

Standardisation always accompanies mechanisation ; the one is both an essential condition and a consequence of the other, for machines, less flexible than men and women, must be uniformly fed and can only give a standardised production. Mechanisation has not only made entries more legible ; it has also inevitably led to a certain order in the arrangement of documents.

But the office, like every branch of economic life, has not only experienced empirical standardisation ; it has also been powerfully affected by the wave of deliberate standardisation which the scientific management movement began. This movement, connected with, but not solely due to mechanisation, has caused changes in appliances, in the size, shape and internal arrangement of documents, and in methods of work.

There are special committees in a number of countries which study and encourage the standardisation of office machines and certain parts of these. The process is held up to some extent by difficulties of competition and by the independent ideas of certain constructors ; but it is nevertheless in full swing, and its success can only be of advantage to the worker.

The standardisation of documents, including their format and internal arrangement, has gone forward much more rapidly. The German-speaking contries have based their standardisation of formats on a single system, which starts from a sheet with an area of one square metre, the sides being in the ratio of 1 : 2, and arrives at the smaller formats by successive crosswise bisection of the original sheet. The Latin and Anglo-Saxon countries have effected this standardisation by adopting the commonest formats and reducing them to a small number of well-defined types.

As regards the internal arrangement of documents, considerable trouble has been taken in the industrial countries to secure the general adoption of a minimum number of well-arranged standard forms for commercial documents—cheques, bills of exchange, credit and debit notes, statements of account, invoices, etc. Progress in this field, which has been most pro-

nounced in banks, is naturally facilitated by the standardisation of formats.

Lastly, in all big offices, methods of work are now almost completely standardised ; but this is a special aspect of the problem of preparation, and will be treated in the following section.

Preparation and Supervision of Work

Can an office employee's work be prepared, measured and checked like that of a manual worker ? A practical answer to this has still to be given. It is clear enough that in the case of uniform, continuous work there is no great difficulty in making a preliminary study of the operation ; but even in the biggest administrative department or the most completely mechanised office there will always remain work which falls as a rule exclusively to the managerial staff and to which such a system cannot apply. In smaller offices indeed this statement usually holds good for the whole of the staff.

Preparation must nevertheless find a wide scope in all big offices where the work closely resembles that done in mass production factories—where, that is, organisers will have the same reasons for finding " the one best way to do the work ". Research on this subject involves the following :

1. Subdivision of the work into its principal stages, each of which can be entrusted to a specialist ;
2. determination of the material and machinery with which each stage can be best performed ;
3. determination of the rational order in which the stages should be taken, and the optimum position of the worker responsible for each stage (routing) ;
4. subdivision of the stages into elementary operations ;
5. study of the elementary operations (usually on a time basis) in order to simplify and co-ordinate the worker's movements and fix the standard time for each ;
6. determination of the unit for the calculation of output (sheet, line, stroke, etc.).

It is clear then that the " stages " of a given piece of work must be distinguished from the " elementary operations ". The search for the different stages might, for instance, result in the following decision : certain data should first be shown in a general statement in manuscript drawn up by a book-

keeper; then each item of the general statement should be reproduced on the appropriate form by a book-keeping machine, the individual accounts being prepared simultaneously; the form would then pass to a folder before being placed in an envelope, itself fresh from the addressing machine, and so on. The subdivision of these stages into elementary operations then leads to the preparation of an instruction note, which could be drafted, for a typist for instance, as follows:

Order No.	Operation	Time allowed min.	sec.
1	Take original in left hand and place on reading rest	0	6
2	Take blank paper in right hand and carbon paper in left; repeat five times to form packet	0	44
3	Insert packet in carriage of machine	0	10
4	Adjust in order to start typing in right place	0	6
5	Type address	0	38
6	Type seventeen lines of text	3	19
	Total time allowed: 6 minutes.		

Methods of work are thus completely standardised, recourse to preparation being no more than the last stage of a process started by such material factors as the machine's degree of flexibility and the standardisation of documents. Certain clearly defined methods and well-thought-out combinations have long been recommended for the handling of the keys of typewriters and accounting machines, and efforts are made to secure their adoption by all the operators.

From the technical point of view, the standardisation of methods increases output, permits staff to be interchanged, eliminates errors, and facilitates supervision.

It may seem extraordinary that, the machine manufacturers having built their apparatus for specified purposes, the organisers of office work should spend time on the problem of what sort of machine to adopt. The truth is, not only that the same operation can be done with different machines at very different speeds, at very different prices, and with very different results as regards appearance, but also that a given machine may be put to uses for which it was not originally intended. Addressing machines, for instance, have been used to draw up debit notes and other documents.

No case appears to be on record, as far as office work is concerned, in which preparation has been able to solve the problem of what is known in workshops as "work to order"—that is, work which varies constantly within certain limits. In

offices in which some employees are engaged on duties fluctuating in this way, attempts at preparation have usually been abandoned. But there are undertakings where, despite division of labour and mechanisation, an employee may be called upon to do various duties, though the number of these is likely to be limited. For instance, the functions of a book-keeper in a factory store vary according as the operation concerns raw materials or finished products received, goods issued for manufacture, goods issued for sale, exchanged goods, spoilt goods, etc. In cases of this sort, the employee should be given as many instruction notes as are necessary to meet all the cases which may arise.

Supervision of work has two sides ; the exercise of a check on quality (correctness, cleanliness, appearance, etc.), and the registration of quantity, either to permit the introduction of piece rates or simply to increase output by its own psychological effect.

The exercise of a check on quality, the main factor in which is correctness, usually involves inspection by a supervisor, but mechanical auxiliaries can sometimes be used. For instance, to check the correctness of the holes punched in cards during statistical operations, the cards are subsequently passed through a second apparatus, similar to the punching machine, but with blunted punches ; a checker does the punching-machine employee's work over again, and if either has made a mistake the key cannot perforate the paper and attention is drawn. Again, with a view to ascertaining whether a stack of sorted cards all have certain of their perforations in common, a rod is passed through the stack at the appropriate place ; if there has been an error, it cannot pass straight through.

The quantity of work may be ascertained simply by counting (number of sheets typed, number of copies run off, number of invoices or other documents produced, etc.) ; this process is often simplified by the placing of a serial number on each document, or by an automatic register which counts the number of lines or strokes on typewriters and accounting machines, or by time measurement. In the last case small clocks with printing devices, or other time indicators, are used, the document having to be passed through these ; but this is not a satisfactory method unless the work on a given document is sufficiently long.

In general, it must be admitted that systems of preparing and supervising work, which are spreading more and more

widely in offices, have psychological and physiological effects on the staff very similar to those of mechanisation itself.

Social Phenomena Accompanying the Increased Use of Machines

These phenomena concern both the individual worker and the body of workers as a whole. The former are partly of a physiological and partly of a psychological nature, whereas the latter exercise their effect through their influence on the demand for labour.

Physiological Phenomena

The peculiar characteristics which office work takes on when it is mechanised have a pronounced physiological effect on the worker.

The physical fatigue involved in the use of machines, at the speed which is required of office employees to-day, should not be underestimated. Indeed, the effort needed to work these machines is far from negligible. It has been calculated that to strike a key on an ordinary typewriter is equivalent to lifting one kilogramme by 15 mm. ; and as it is estimated that a typist strikes the keys about 50,000 times a day, it is clear that the mechanical energy expended is equivalent to about 750 kilogrammes.

Similarly, to strike a key of a non-electric calculating machine requires a certain effort, which is augmented by the diversity of the movements required to register the different figures. Much more effort is required to register 9 than 1, for in the latter case the guide levers have to turn the counter wheels for a very short distance only, and therefore largely run idle.

Book-keeping machines always require a considerable effort of the operator. If they belong to the " flat " type—that is, if the carriage moves bit by bit across a larger board—the employee must take up a most uncomfortable position to make entries at the top of the sheet.

On the other hand, when " carriage " machines have a special roller for holding the paper, this part of the appliance is always bulky and, therefore, heavy to manipulate. Many cases are quoted in which employees in mechanised offices have complained of excessive fatigue in the shoulders and back and sometimes even of stiffness and muscular pain necessitating one or more days' rest.

Although, as was mentioned above, sufficient steps have not yet been taken to adapt the machine to the worker, many machine constructors have tried to produce appliances that can be handled with the least possible fatigue for the operator: keyboards exist which enable the person using them to achieve the greatest possible economy of movement and effort; levers and accessories have been placed in the most practical position; workers have been enabled to sit instead of standing at their work, and seats have been provided that meet hygienic requirements (permitting of adjustment upwards and sideways, not interfering with the worker's movements, supplied with a foot-rest).

The electrification of machinery is a very valuable step forward in this respect, and has greatly reduced the physical effort required of employees, particularly those who work at accounting machines. In most cases, modern machines of any considerable bulk are fitted with ball bearings, which greatly facilitate the moving of the mechanical parts by hand.

Efforts have also been made to eliminate all fatigue not directly the result of the work, particularly by extending the use of internal transport devices.

For reasons which will be readily understood, undertakings have preferred not just to reduce the speed at which work is carried out, but have tried to diminish its prejudicial effects by the selection and training of employees.

Selection based on scientific personal examination is relatively rare. A few offices, however, put their candidates through such tests as measuring the speed of reaction by d'Arsonval's chronoscope, or measuring dexterity by means of an apparatus composed mainly of a metal block in which cut-out figures must be followed with a steel pen, an electrical device indicating contacts due to errors. But most often candidates are selected on the basis of questionnaires and interviews; their past records and the impressions obtained from direct observation enable the employer to choose, with a reasonable chance of success, the staff best fitted for the work in question. Moreover, vocational training also plays a part, and its effects are now beginning to be felt.

Again, the speed of operations has been rendered somewhat more tolerable by the efforts of organisers and physiologists to instruct staffs in the best methods of performing their work (arrangement of documents and accessory apparatus, position

of the hands, correct fingering for different machines). This branch of research is still in a rudimentary stage, and the question of adapting the employee to rapid mechanised work is by no means yet fully explored.

The most frequent complaint made by employees in big offices is the physiological effect of the noise and vibration of the machines. This effect is increased because, to facilitate supervision and the transmission of documents, as many as fifty machines, or even more, are frequently placed in a single room ; in other cases the room is so small that every noise is amplified. This is a serious drawback, but it would appear to be among the simplest to overcome or diminish, and many attempts — most of them successful — have been made in this direction. Machines have been encased or placed on stands of rubber or porous material ; the floor, the walls and even the ceilings have been covered with carpets, hangings, linoleum or special compositions ; and in large workrooms screens have been placed which, though leaving openings for the passage of persons, block the direct transmission of most of the noise.

Another peculiar physiological characteristic of the work which office employees have to perform is eye-strain. This arises both out of the work itself, for the employee is constantly reading tiny symbols, and out of the position of offices, which are usually in the centre of large towns where the daylight usually comes from windows giving on to narrow streets. Efforts have been made to improve the natural lighting by substituting glass for solid walls wherever possible, or by having offices on the top floor of buildings, where roof-lighting can be arranged. Very many office employees still do the bulk of their work by artificial light ; happily, however, considerable progress has been made in this field. It was first of all found that electric light in itself does not contain rays harmful to the eye, for these are blocked by the glass bulb ; and that if prolonged work by artificial light causes eye trouble, it is due to the insufficient strength of the light at the level of the work and to insufficient diffusion. The question of the light required for efficient work has been very closely studied, and most of the big workshops and offices make numerous photometric tests before finally fitting their lighting systems. It is calculated that in offices the strength of the light at the effective level of the work (that is, 75 or 80 centimetres from the ground) should be between 40 and 80 lux ; and that in typewriting rooms it should be considerably higher (never less than 80 lux).

A pin-hole beam of light gives rise, on most surfaces and particularly on paper, to reflection resulting in patches which dazzle the eye. Light must be diffused in order to suppress this disadvantage. In an office there is practically no limit to the desirability of diffusing light. The only drawback to diffusion is that it does away with shadow and thus diminishes the relief outline ; as the work is always based on documents, the employee does not need to see objects in relief. Experts recommend the use of light-diffusing globes or, still better, indirect lighting, all the light being thrown on to the ceiling first and reflected back into the room. In the last decade, many lighting systems of this sort have been produced by constructors and are now a current market article in widespread use.

Account has also been taken of the physiological requirements of the eyes by adopting the most suitable colour for artificial lighting. The rays of incandescent lamps are sometimes allowed to filter through coloured glass, or tubes with rarified vapours or gases are used.

The effective value of lighting, whether natural or artificial, is increased considerably if the walls and ceiling are painted very light colours and carefully kept in good condition. Many undertakings make a special point of this.

Lastly, the well-being of the employee, in the office as in the workshop, is very considerably influenced by the use of more or less efficient ventilating and heating systems. From this point of view, mechanisation, by facilitating the establishment of larger and larger undertakings, has had good results. Nearly all big offices have modern heating equipment which satisfies hygienic conditions by maintaining the temperature at somewhere near 64 or 65 degrees—which is more difficult to achieve in modern work places, which have often a large expanse of glass in the walls—removing gas or fumes from the atmosphere and not permitting the air to become too dry or too moist. A great variety of such appliances exist. Most of them heat by convection rather than by radiation, as this method spreads the heat more evenly.

Old methods of heating still exist, but they have been improved ; gas or coal stoves have been brought up to date, so that the products of combustion are carried out of the room and the most modern of those appliances keep the air circulating in a shaft that is completely shut off from the source of the heat, so that uniform heating is achieved and no harmful gases are allowed to escape.

Electric heating, by means of resistance radiators, is the most practical solution for small rooms. The appliances are clean, take up little room and can be easily regulated. Unfortunately, the cost of the power required is comparatively high.

Central heating is, of course, the commonest method in modern offices. It may be subdivided into two types : the one employing steam and the other hot water. The hot water system is better, because the radiators or finned tubes employed remain at a relatively low temperature and cannot lead to the carbonisation of dust. Efforts have been made to overcome this difficulty entirely by increasing the surface of the radiators to a considerable extent, so that a still lower temperature can be used. Some contractors have successfully employed a system of heating by means of pipes sunk in the floor or the ceiling.

The only means of obtaining a constant uniform temperature in very large premises is heating by the pulsion of air. This is done by appliances known as aerotherms, consisting of finned radiators through which a current of air is driven by a fan. If those appliances are properly arranged and the air driven in in the proper direction, the whole of the air in the room can be made to circulate completely.

Most of those heating appliances can be regulated thermostatically, but this automatic system frequently breaks down and still calls for a certain amount of supervision.

The purpose of ventilation is to renew the air in the room by driving out the foul air and bringing in fresh air. With a good system of ventilation, the air should be renewed at the rate of about 30 cubic metres per person per hour, and the various components of the atmosphere should be made to circulate sufficiently to eliminate all stagnant air pockets without, however, causing draughts that might annoy those working in the room.

In small rooms natural ventilation without any mechanical appliances is often sufficient. In this case the air should be admitted through special openings, the size of which can be regulated. The mere opening of a window produces too rapid a change in the temperature of the room, or the air coming in may raise dust. The most usual method is to have sliding, slotted or other ventilators in the upper parts of the windows. Quite frequently air is brought in through flues unconected with the windows. With a good system of ventilation, the air

should be brought in at a different level in summer and in winter : the air should come in at the level of the feet in hot weather and above the workers' heads in cold weather. The opening for allowing the air to escape should be near the ceiling and on the opposite side from the windows, so as to eliminate the warmest layers of gas.

When the rooms are of a certain size, suction appliances must be fitted, such as sky-lights or ordinary chimneys or special chimney pots for drawing out the air. The proper circulation of all the air in the room can be ensured by a suitable arrangement of the openings for admitting and removing air and of the sources of heat.

Forced ventilation by means of mechanical appliances is necessary when more than 50 people are working in one room. For this purpose bladed fans of the propellor or turbine type are used. They always work at low pressure, which means that the ventilation pipes must always have a large cross-section so as to ensure a sufficient movement of air. Mechanical ventilation can be achieved either by forcing fresh air into the room or by drawing out the tainted air or by a combination of those two systems. The number of appliances and the number of openings for the incoming or outgoing air must be sufficiently numerous to prevent direct draughts, which would leave large sections of the atmosphere in the room untouched. Air is usually brought in through a shaft reaching a height where it is beyond dust.

Ventilation by forcing air into the room or by this method combined with exhaust fans can often be linked up with the heating system and the means for purifying and moistening the air. This is known as air-conditioning and is the most complete solution of the problem, ensuring the best hygienic conditions for the occupants of the room. The plant required comprises a number of special radiators and a chamber in which the air is subjected, first of all, to a very fine spray of water and then to condensation by means of baffle-plates, which retain any excessive moisture, The air is thus raised to the desired temperature and given a content of moisture near saturation point. Practically all the dust is eliminated. The temperature is usually regulated thermostatically. In summer the same plant can be used to freshen the air by omitting the passage of the air through the heating appliances.

Individual Psychological Phenomena

As we have seen, the machine has stamped office work with two characteristics, rapidity and uniformity, and those have been accentuated still further by standardisation and the preparation of the work. Certain disadvantages for the worker result, particularly an increased nervous tension, which may become unbearable and cause physiological and even mental disorders.

Nevertheless, it should not be imagined that this discomfort and those disorders affect the great body of office workers. Certain psychological types and persons fit in very well with regular, rapid work. Moreover, uniformity in functions—the "standardisation of mental effort"—may lead to a routine which frees the employee's thoughts and restores some degree of liberty to the brain. It has been proved that this phenomenon occurs frequently in industrial work, and there is no reason to suppose that it is much less common in mechanised office operations. Moreover, though mechanisation has accelerated work, it is not responsible for monotony; copyists, despatch clerks, writers, and book-keepers' assistants had highly monotonous tasks long before the machine appeared.

It has been maintained that the introduction of the bonus system of payment in big offices has contributed to the increased nervous tension of the work. This system deserves attention for a moment. First of all, bonus systems are in force in a relatively small number of offices. As in industry, they consist in paying the employee a time-rate salary, to which a bonus is added if he exceeds the normal output. A good bonus scheme should fulfil the following conditions: it should encourage the employee to increase his output, but not incite him to exceed a certain limit which would be harmful to his health or to the efficiency of his work; and its calculation should be simple, so that the employee can check the accuracy of the sum he receives.

Most bonus schemes are so arranged that the employee only receives a part of the saving he has caused, and this proportion often diminishes when a certain point is passed. The natural result is stabilisation round an optimum point; it is in the employee's interest to reach a certain output and receive a large bonus; but he is not encouraged to exceed this output to any great extent, for the additional effort will not result in a

corresponding profit. In most cases quality is taken into account, either by eliminating defective output from calculation of the total, or by penalising mistakes or bad work. In some undertakings collective bonuses are paid to the members of groups of employees according to their total output.

It is clear, then, that the bonus system should not be rejected *a priori*, but that it can be harmful to the employee if the scheme used incites the worker to speed-up his work unduly.

Another psychological consequence of new organisation methods in offices is that division of labour and specialisation have meant loss of the power to satisfy what de Man has called the instinctive desire for importance. In the old-fashioned office, even the office-boy felt that he was somebody, simply by belonging to the undertaking; but the invoice clerk who now works a book-keeping machine all day is nothing but an impersonal unit. In workshop and yard there has always been a considerable number of nameless hands; but these are undoubtedly a new feature in office work.

Some psychological types, however, readily adapt themselves to mechanical work, and some employees feel a sense of pride in operating a complex office machine. The difficulty can also in some measure be overcome to the workers' advantage by vocational guidance, and it is satisfactory to note that this is being increasingly employed in the recruiting of office staff.

The development of methods of selection has undoubtedly contributed towards the present feeling of inferiority among subordinate staff. One of the reasons why the office-boy of the old days thought himself an important person was the fact that no impassable barrier separated the lower from the higher grades, and many cases of a rise from the one to the other did occur. But in selecting staff by modern methods for well-defined mechanical duties, the employer runs the risk of eliminating those who have not the physical qualifications for the use of certain machines, but have on the other hand the gifts of intelligence and character which would permit them to reach the higher rungs of the ladder. The inverse is equally true: owing to such methods, the employee engaged as a machine operator receives a strong impression that he is meant exclusively for this unimportant function and must remain his whole life in an inferior post.

Attention must therefore be given to means of finding the office employee new motives for taking an interest in his work.

The manual worker who must master his material can find an interest in the physical differences it reveals and the various ways in which it may react as he gives it shape. The office employee has not this possibility. If his instinctive desire for importance is not satisfied, most of his reasons for taking a personal interest in his work disappear. Arrangements must therefore be made for meetings and lectures in which the organisation of the undertaking can be explained to the employees and each be helped to understand how his own functions fit into the general scheme.

All the methods—joint committees, suggestion boxes, etc.—which permit the employee to make suggestions to his superiors are also excellent as a means of giving back the feeling of individual value. Many undertakings have adopted these methods; but it must be noted that they are less common in offices than in the field of industry proper.

Collective Phenomena

The technical changes which office work has undergone have been accompanied by collective social phenomena still more pronounced than those of an individual nature described above.

First of all, a complex hierarchy has arisen among office employees. It may be objected that such a hierarchy has always existed; this is to some extent true, in the sense that there have always been, on the one hand, a managerial staff considered as the heads of the undertaking, and on the other a body of subordinate employees who are often less highly skilled than good manual workers. But to-day a classification of some complexity may be made within the subordinate category. American authorities have repeatedly attempted to bring this state of affairs on to paper in their writings, and Miss Marion A. Bills, among others, has prepared a classification which gives an excellent idea of the new structure. Starting from the bottom, she divides office work as follows (a corresponding classification of employees being established at the same time);

(*a*) simple work (operation of simple apparatus such as fastening machines, and errands);

(*b*) work requiring the knowledge of a few precise operations (simple filing, invoicing, operation of addressing machines, etc.);

(*c*) work requiring knowlege of a large number of precise operations (complicated filing, making-out of waybills, debit and credit notes, simple standardised correspondence, keeping graphs and tables up to date, execution of uniform work by means of book-keeping and calculating machines);

(*d*) operations requiring full grasp of a whole field (costing, commercial correspondence. elementary book-keeping, cashier's work, designing of equipment, simple technical calculations);

(*e*) operations requiring full grasp of the whole undertaking (management, secretarial, general accountancy, budget supervision);

(*f*) highly technical operations for which special training is necessary (drafting of machine plans, solution of technical problems, actuarial work, architectural work).

Within these categories, a distinction should be made for classification purposes between employees required to carry out operations and those required more particularly to direct and supervise. Classification should also be based on the judgment and initiative required—that is, on the average number and nature of the decisions to be made daily.

The mechanisation of office work, while increasing the necessity for preparation, supervision and checking, has led to a considerable increase in openings in categories (*b*) and (*c*) above. This means that there is less demand for persons with the knowledge and skill acquired by a long general training and a complete apprenticeship, and more demand for cheap labour, qualified in certain respects and capable of rapid preparation for work of a narrowly restricted type. There is no need today to train an office employee fully; it is enough to accustom him to the machine which he has to operate. There is less and less demand for book-keepers and correspondents, their work being given to girls who operate book-keeping machines, supervisors of statistical machines, clerks who copy standardised letter forms, etc. If such staff has been selected with care, it is soon capable of doing good service, for its duties require a less thorough training than those of a factory machine worker; inded the manual worker (except the unskilled labourer) must always obtain some knowledge of the material with which he deals.

Naturally enough, such a state of affairs affects the composition of the staff as regards age and sex. Statistics do not as a rule give exact information on the grouping of office employees by age, but visits to big mechanised undertakings will suffice to show that young persons of either sex between 16 and 25 years of age are very commonly used to work and supervise machines. There has indeed been a reaction against this lowering of the average age of office workers, and in some of the collective agreements concluded in France in 1936 it is stipulated that females under 20 years shall not be employed at machines.

The statistics of distribution by sex are more complete. An analysis of those will be found in a statistical survey of non-manual workers published in the *International Labour Review* in 1936 [1]. According to this survey, the proportion of women employed varies from 11 per cent. in Bulgaria to 35 per cent. in France and Switzerland and 38 per cent. in Norway. This proportion appears to correspond fairly closely with the progress of mechanisation in the respective countries, although there are entirely mechanised offices (in the Netherlands, for example) which employ only men. In any case, no definite relationship of cause and effect can be established between those two sets of phenomena ; it has already been mentioned that deductions of this type must be made only with very great prudence.

Similar conclusions may be drawn from a study of the same variation over a period of time instead of as between countries. Another section of the survey referred to compares the percentage of women employed on non-manual work at different dates. In many countries it was found that the proportion had risen considerably since before the war, increasing from 18 per cent. in 1907 to 44 per cent. in 1933 in Germany, from 20 per cent. in 1906 to 54 per cent. in 1931 in France, and from 47 per cent. in 1910 to 54 per cent. in 1930 in Switzerland.

But the above are figures for *non-manual workers*—a category in which some countries place groups that others exclude, but which has in any case a wide scope. If statisticians could provide figures relating to office employees only, it is certain the percentage of women would be still higher. The French Federation of Women's Trade Unions, for instance, stated in

[1] Cf. *International Labour Review*, Vol. XXXIV, No. 12, Aug. 1936 : " Statistical Survey of Non-Manual Workers ". This article contains detailed information corroborating the indications given here.

1928 that 70 per cent. of the persons employed at office machines in France were women. In the United States of America in 1920 there were 562,664 women engaged in the occupations of typist and shorthand-typist, or 8 per cent. of all women workers.

In general, then, it cannot be denied that the proportion of women among salaried employees has very greatly increased as compared with the years before the war; the increase has however been slower since 1920, and in some countries there has even been a reverse movement.

Since office work has become accessible to younger persons and training has grown easier, the average wage level was bound to suffer. Here again statistics are not of much value, first because they are always incomplete as regards wages, and secondly because they class highly paid managerial employees with other salaried persons. But numerous enquiries have shown that the subordinate staff of a mechanised office belongs to the lowest-paid groups of workers. It has been found, for instance, that in Germany the earnings of persons in this group vary between 100 and 160 marks a month, and that in the Netherlands they are seldom higher than 900 gulden a year. In France earnings of under 800 francs a month were apparently the rule until recently, but the collective agreements concluded during the summer of 1936 considerably raised the level. Here, for instance, are some of the minimum wage rates stipulated in the collective agreements for salaried employees, technicians, supervisory staff and engineers in the metal, engineering and related industries of the Paris region, signed on 19 July 1936:

		Monthly salary French frs.
Persons employed at office machines, who can use adding, calculating, addressing and duplicating machines, etc.:		
	Men	1,300
	Women	1,000
Persons employed at counting, punching and statistical machines	Men	1,350
	Women	1,150
Persons capable of working book-keeping machines and keeping accounts, and having a good knowledge of book-keeping	Men	1,450
	Women	1,325
Typists (40 words a minute)		1,100
Shorthand-typists (100 words shorthand, 40 words typing)		1,200
Shorthand-typists who can translate into one foreign language		1,600
Young employees under apprenticeship contracts (16-22 years of age)		600–1,050

Office workers, therefore, are now divided into classes. The managerial staff is becoming more and more sharply distinguished from the subordinates; and the standardisation of duties and the fixing of salaries within narrow limits have placed the latter category in a position similar to that of factory workers. Before mechanisation, on the contrary, as is shown above, duties were not so exactly specified, and the level of earnings was not subject to any uniform scale; consequently, office workers, whatever their duties, did not feel a sharp distinction one from another.

The division of office employees into an upper and a lower category might have been expected to favour the establishment of organisations; and it is certain that the trade union movement, which was practically unknown twenty years ago as far as these workers were concerned, has now appeared among them. But the movement and its ideas have developed slowly. The staff of the mechanised office receives but a brief vocational training, and it is composed largely of young workers and women. Consequently there is less cohesion than among other groups of workers and less solidarity than among factory workers, for such posts are still often considered as stopgaps which the worker is glad to leave as soon as a favourable opportunity—other work, marriage, etc.,—can be found.

These are the reasons why in some countries the trade union movement is much less advanced among office employees than among manual workers, though recent years have seen a pronounced assimilation between the nature of the work done by the two groups.

The most important question raised by the mechanisation of office work, namely, whether it has caused unemployment, remains to be considered. The question is best taken in two parts. First of all, has mechanisation in offices been a cause of unemployment in general? Secondly, has it resulted in unemployment among skilled office workers?

A glance at methods of work in any mechanised office will show that a given quantity of work is done by far fewer employees than was formerly the case. But there is no point in citing such figures as have often been advanced—for instance, that with a machine the employee can do 10, 20, or 40 times his previous amount of work. No general conclusion can be drawn from these, for the percentage of increase in output fluctuates widely according to the kind of work done, the

manner in which it is prepared, and the type of machine used. It can only be said that in most cases it is high. If, on the other hand, statistics are taken as the basis of argument, it is found that the proportion of office to manual workers has very greatly increased since before the war, and that, though slower since 1920, the increase continues. This is apparent from the following table, incomplete as it is [1] :

NUMBER OF NON-MANUAL WORKERS PER 100 WAGE-EARNERS IN DIFFERENT PERIODS

Country	1905-1911	1929-1934
(*a*) Population censuses		
Germany	27.1	36.9
Australia	12.9	29.0
France	26.8	33.1
Switzerland	22.5	31.0
(*b*) Censuses of establishments, etc. (manufacturing and mining only)		
Australia	7.1	12.1
Belgium	4.9	9.1
Canada	8.6	16.9
United States	11.9	15.4
Finland	5.7	8.7
Great Britain	7.6	11.3
Sweden	9.0	13.1
Switzerland	6.8	9.6

It will be noted that in the latter part of the table, which refers only to manufacturing and mining, the figures are not so high as in the former, but that the rise over the period considered is sharper. There can be no doubt that the office side of manufacturing has risen considerably in importance ; indeed certain writers declare that while the number of manual workers per unit of production has steadily decreased, the number of salaried employees has risen substantially. It is for instance stated that in increasing their output by 120 per cent. between 1900

[1] Cf. *International Labour Review, loc. cit.*

and 1920, United States employers engaged only 65 per cent. more manual workers, whereas the number of office employees increased by 190 per cent.

A comparison between a number of countries as regards the division of all workers into the " manual " and " office " groups at a given date gives the following figures [1] :

PERCENTAGE OF NON-MANUAL WORKERS IN VARIOUS COUNTRIES ACCORDING TO CENSUSES OF POPULATION ABOUT 1930

Country	Date	Non manual workers [1]	Wage-earners
Germany	1933	27.0	73.0
Austria	1934	23.0	77.0
Bulgaria	1926	6.4	93.6
Chile	1930	19.8	80.2
Denmark	1930	20.1	79.9
France	1931	24.9	75.1
Italy	1931	12.0	88.0
Norway	1930	18.8	81.2
Switzerland	1930	21.7	78.3
Czechoslovakia	1930	22.7	77.3
United States	1930	30.0	70.0

[1] These figures are not strictly comparable, for in some countries such groups as domestic servants, liberal professions, civil servants, and relatives helping the head of the family are included as office employees, whereas others exclude them.

These figures show that on the whole office employees constitute some 20 per cent. of the occupied population. The proportion is very high (over 25 per cent.) in the United States and Germany, fairly high in France, Austria, Czechoslovakia and Switzerland, and low in Bulgaria and Norway. It would appear that apart from Norway the percentage is again determined by the degree of mechanisation ; and this conclusion appears even more accurate if the proportion of administrative and office staff to total working force is examined in manufacturing and mining alone, where the figure lies round about 10 per cent., and is obviously greatest in the most highly industrialised countries (United States 11.7, Germany 8.5, Sweden 7.5), and lowest in those where industry is least developed (Bulgaria 2.7, Finland 3.7).

[1] Cf. *International Labour Review : loc. cit.*

The number of office employees thus increases with mechanisation. The reason is simple enough : office machines make it possible to carry out profitably a whole series of operations which would be too expensive if they had to be done by hand. The growth of large administrative departments and the extension and concentration of undertakings have made it easier to install office machinery on a large scale and to increase supervisory and statistical work to an enormous extent, for the machine reduces the cost of each item to a minute figure. A few years ago no organiser could have contemplated completing daily such extremely complex statements as the inventories of all products and raw material kept in large factories or stores.

While mechanisation has enabled each individual substantially to increase his output, it has also opened wide fields for new forms of office work. On the other hand, numbers of office employees have been reduced to unemployment by the economic depression, for, when a large factory stops work, the office staff is also deprived of its employment.

A census of the machines used in offices in industrial countries would provide a valuable addition to the statistics of human labour already compiled, but such statistics have been collected in rare cases only. But some idea of the extent to which methods of mechanical registration have been adopted may be obtained from the number of cards for statistical machines used in certain countries. The following are the figures calculated for 1934 by a private undertaking :

	Million cards
Spain	30
Italy	40
Switzerland	40
Belgium	60
U.S.S.R.	100
France	280
Germany	600
Great Britain	600
United States	2,000

But the second part of the question raised above remains unanswered : To what extent has mechanisation caused unemployment among skilled office workers ? No exact reply can be given to this question. It can only be stated that such employees are being eliminated in large numbers from the execution of current work, but that many have no doubt found employment in the preparation and supervision of such work in factories as

well as in offices. This process cannot be expressed numerically, for in many statistical compilations time-keepers and those who prepare and supervise work in factories are classed as manual workers and not as salaried employees ; but there is no doubt that a considerable reduction of unemployment among office workers has resulted. Lastly, it must be borne in mind—for this is a direct consequence of mechanisation—that the construction, sale and upkeep of office machines have provided good posts for many of the very persons whose qualifications would have made them satisfactory office employees in former times. The Census of Manufactures shows that in the United States in 1929 over 33,000 wage and salary earners were employed in the construction of typewriters, cash registers, and calculating and book-keeping machines.

In general, therefore, it would seem that office employees have been less affected by the depression than manual workers, for mechanisation has widened the scope of the office even more than that of the workshop ; but that skilled employees and those in the prime of life have suffered from the competition of female and adolescent labour.

REPORTS AND ENQUIRIES

The Working of Sickness Insurance in Norway [1]

Compulsory sickness insurance was introduced in Norway by an Act of 18 December 1909, which came into force on 1 July 1911. At the outset this Act made insurance compulsory in principle for all wage-earners. Voluntary sickness insurance had not developed to the same extent in Norway as in the other two Scandinavian countries ; in 1910 the membership of the voluntary sickness funds was estimated at between 70,000 and 80,000 only.

The Sickness Insurance Act has been amended several times since it came into force, but none of its essential characteristics has been changed.

Insurance Institutions

The Act provides for one sickness fund at least to be set up within each local government area. The number of funds established under this clause — local sickness funds — was 757 in 1935. Each fund has legal personality and is managed by a committee elected by the district council and consisting of five members, of whom three must be insured persons and one an employer contributing to the compulsory sickness insurance scheme.

In addition to the local sickness funds there are 34 private sickness funds recognised by the National Insurance Office (recognised sickness funds). Persons for whom insurance is compulsory are considered to have complied with the obligation if they are affiliated to one of these

---

[1] Sources : *Norges offisielle statistik. Syketrygden, 1926-1936* (Official Statistics of Norway. Sickness Insurance).

Arsberetning fra Rikstrygdeverket (Annual Report of the National Insurance Office). Nos. 33-40.

Statistisk arbok for Norge (Norwegian Statistical Year-Book). 1936.

Ormestad : *Syketrygden i 25 ar* (Twenty-five Years of Sickness Insurance). Oslo, 1936.

funds. Most of the recognised funds are attached to an undertaking or are intended for the workers in one special trade.

Membership

The legislation makes provision for two categories of insured persons : those insured compulsorily and those insured voluntarily.

Insurance is compulsory for all persons of 15 years or over in public or private employment who are in receipt of remuneration paid entirely or partially in cash, provided that their total income does not exceed certain specified limits. Some categories of workers are included even if they receive no cash wages. Under the 1909 Act the wage limit was 1,200 crowns in rural areas and 1,400 crowns in urban areas, but it was raised by an Act of 6 August 1915 to 1,600 and 1,800 crowns respectively. After being abolished except for public servants by an Act of 15 June 1917, the wage limit was reintroduced by an Act of 17 July 1925, which left the figure to be fixed by the administrative authorities. It was first fixed at 6,000 crowns, then lowered to 5,400 in 1928 and to 4,500 in 1931 ; it was again raised to 6,000 crowns in 1936.

Certain groups of workers, such as those whose employment is only temporary, are exempt from compulsory insurance. Seamen employed on board ships proceeding to foreign ports were included in the insurance scheme from 4 January 1937. Since 1 January 1936 insurance has been compulsory for fishermen, even when they work for their own account.

Voluntary insurance is open to all persons of 15 years or over who are in good health and whose annual income does not exceed a limit fixed by the administrative authorities. This limit was originally 800 crowns in rural districts and 1,000 crowns in urban districts. This restriction was felt to be too severe ; and the limit was raised in the course of the 1915 revision of the scheme to the same rate as for compulsorily insured persons. In 1930 it was fixed at 5,400 crowns and in 1933 was lowered to 4,500 ; but at the same time special provision was made for voluntary insurance for persons whose annual income was between 4,500 and 6,000 crowns.

Table I (p. 519) shows the average membership of local sickness funds, classified by sex, during the years 1912 to 1935.

It will be seen from this table that the membership of compulsory insurance funds has increased steadily except in 1921, 1926, and 1931. The decrease in 1921 was due to unemployment, which affected Norway like other countries during the early post-war years. In 1926 extensive labour disputes deprived many workers of their employment. The decline in 1931 was due in part to a similar cause and in part to the lowering of the wage limit during that year. It should also be mentioned that the great increase in membership in 1916 (about 80,000) is mainly attributable to the relaxing of the conditions for admission to insurance when the legislation was amended in 1915 — more especially to the raising of the wage limit.

TABLE I. MEMBERSHIP OF LOCAL SICKNESS FUNDS AND DISTRIBUTION OF MEMBERS BY SEX

Year	Total membership	Absolute figures		Percentages	
		Men	Women	Men	Women
1912	330,000	194,300	135,700	58.9	41.1
1913	337,620	201,387	136,233	59.6	40.4
1914	340,619	201,775	138,844	59.2	40.8
1915	351,217	206,507	144,710	58.8	41.2
1916	429,878	257,046	172,832	59.8	40.2
1917	473,439	289,244	184,195	61.1	38.9
1918	520,657	327,924	192,733	63.0	37.0
1919	543,124	342,970	700,154	63.1	36.9
1920	558,661	355,138	203,523	63.6	36.4
1921	548,250	344,142	204,108	62.8	37.2
1922	570,524	359,000	211,524	62.9	37.1
1923	579,314	367,405	211,909	63.4	36.6
1924	584,800	368,804	215,996	63.1	36.9
1925	596,184	373,960	222,224	62.7	37.3
1926	591,809	367,415	224,394	62.1	37.9
1927	600,186	370,569	229,617	61.7	38.3
1928	618,821	383,484	235,337	62.0	38.0
1929	626,634	390,245	236,389	62.3	37.7
1930	636,874	395,293	241,581	62.1	37.9
1931	635,379	389,081	246,298	61.2	38.8
1932	647,649	393,378	254,271	60.7	39.3
1933	669,597	409,864	259,733	61.2	38.8
1934	706,574	435,455	271,119	61.6	38.4
1935	751,660	469,914	286,746	61.9	38.1

The proportion of compulsorily to voluntarily insured persons is shown in the next table.

TABLE II. RATIO OF COMPULSORILY TO VOLUNTARILY INSURED PERSONS AMONG THE MEMBERS OF LOCAL SICKNESS FUNDS

Year	Total number of insured persons	Absolute figures		Percentages	
		Compulsory	Voluntary	Compulsory	Voluntary
1913	337,620	334,723	2,897	99.1	0.9
1914	340,619	336,821	3,789	98.9	1.1
1915	351,217	346,771	4,446	98.7	1.3
1916	429,878	422,958	6,920	98.4	1.6
1917	473,439	461,815	11,624	97.5	2.5
1918	520,657	500,294	20,363	96.1	3.9
1919	543,124	510,554	32,570	94.0	6.0
1920	558,661	518,265	40,396	92.8	7.2
1921	548,250	495,096	53,154	90.3	9.7
1922	570,524	511,366	59,158	89.6	10.4
1923	579,314	519,927	59,387	89.7	10.3
1924	584,800	522,448	62,316	89.3	10.7
1925	596,184	528,277	67,907	88.6	11.4
1926	591,809	517,086	74,723	87.4	12.6
1927	600,186	520,359	79,827	86.7	13.3
1928	618,821	535,798	83,023	86.6	13.4
1929	626,634	545,091	81,543	87.0	13.0
1930	636,874	549,289	87,585	86.2	13.8
1931	635,379	536,628	98,751	84.5	15.5
1932	647,649	543,927	103,722	84.0	16.0
1933	669,597	556,325	113,272	83.1	16.9
1934	706,574	582,251	124,323	82.4	17.6
1935	751,660	616,208	135,452	82.0	18.0

The table shows that the number of voluntarily insured persons has steadily increased to a more marked degree than the number of compulsorily insured persons.

The membership of recognised sickness funds increased until 1917 but has fallen more or less regularly since that date. The following table shows the membership of these funds from 1912 to 1935 and the ratio of that membership to the total number of insured persons expressed as a percentage.

TABLE III. MEMBERSHIP OF RECOGNISED SICKNESS FUNDS

Year	Absolute figures	Percentage	Year	Absolute figures	Percentage
1912	31,100	9.4	1924	14,531	2.5
1913	32,947	9.8	1925	14,911	2.5
1914	34,240	10.1	1926	13,187	2.2
1915	36,969	10.5	1927	12,140	2.0
1916	42,700	9.9	1928	11,986	1.9
1917	45,860	9.7	1929	11,995	1.9
1918	29,746	5.7	1930	12,173	1.9
1919	29,454	5.4	1931	11,934	1.9
1920	25,969	4.6	1932	12,183	1.9
1921	22,281	4.1	1933	11,884	1.8
1922	21,611	3.8	1934	11,931	1.7
1923	14,555	2.5	1935	12,220	1.6

Resources

Local Sickness Funds

The resources of the local sickness funds are obtained chiefly from contributions, which vary mainly in terms of the wages of the insured persons, the rates being fixed by the administrative authorities.

According to the Act, the total contribution is in principle distributed as follows: the insured person pays 60 per cent., the employer 10 per cent., the State 20 per cent., and the local authority 10 per cent. In reality the State fraction of 20 per cent. has never been entirely paid up. In accordance with other clauses of the Act, one-fifth of the State contribution from 1911 to 1924 was used to constitute a Sickness Insurance Equalisation Fund for assisting funds that were in financial difficulties. Since 1925 this fifth of the State contribution has gone back to the Treasury. An Act of 27 May 1932 prescribed that the State contribution might be reduced by 50 per cent. when the net assets of the Equalisation Fund amounted to 12 crowns or over per head of the insured population. A reduction of 45 per cent. was accordingly made in the financial year 1932-1933 and a reduction of 50 per cent. in succeeding years. At present, therefore, the insured persons pay 66.7 per cent. of the total contribution and the employer, the State and the local authority pay 33.3 per cent. divided equally between them.

The contributions of voluntarily insured persons whose annual income does not exceed 4,500 crowns are divided in the same way as those of compulsorily insured persons, except that the employer's share must be paid by the insured person himself. Voluntarily insured

persons whose annual income is between 4,500 and 6,000 crowns pay the entire contribution themselves.

The rates of contributions are laid down in a basic scale issued from time to time by the Crown on the basis of proposals made by the National Insurance Office. Since 1 January 1934 the rates for the insured person's fraction of the total contribution under the basic scale have been as follows :

TABLE IV. RATES OF CONTRIBUTION
(*Crowns*)

Wage group	Annual wage	Rate of contribution		
		Compulsorily insured persons : per week	Voluntarily insured persons with incomes up to 4,500 crowns : every 4 weeks	Voluntarily insured persons with incomes from 4,500 to 6,000 crowns : every 4 weeks
	Crowns			
0 *a* (public servants)	0— 300	0.60	3.70	4.80
0 *b* (with family responsibilities)		0.55	3.70	4.80
0 *c* (with no family responsibilities)		0.25	1.90	2.40
I	300— 600	0.45	2.65	3.40
II	600—1,000	0.55	3.45	4.40
III	1,000—1,500	0.70	4.20	5.40
IV	1,500—2,100	0.85	4.95	6.40
V	2,100—2,800	1.00	5.90	7.60
VI	2,800—and over	1.25	7.15	9.20

The group 0 *a* includes public servants and the employees of sickness funds who are entitled in the event of sickness to their full salaries for three months at least. When an insured person has no family responsibilities he is placed in the wage group immediately below the one to which he belongs for the purpose of calculating contributions.

The National Insurance Office may fix higher rates of contributions if the financial situation of a fund requires such a step, or lower rates for funds which are in a favourable situation. The average rate of contribution for all the local funds during 1935 was 6.3 per cent. higher than the basic rate.

Recognised Sickness Funds

The rates of contributions charged by the recognised sickness funds are fixed by the general meeting of each fund. The State pays a contribution equal to two-sixths of the amount of the contributions collected, and the local authority and the employer each pay one-sixth of this amount. The State contribution, however, was reduced in the same proportion as its contribution to the local funds.

Statistics of Resources

The following table shows the different items in the resources of the local sickness funds and the recognised funds from 1926 to 1935, in absolute figures and per insured person, as well as the percentage of each item as compared with the total.

TABLE V. RESOURCES OF SICKNESS FUNDS

(Crowns)

	1926			1927			1928			1929			1930		
	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.
Contributions of insured persons (compulsory and voluntary) and employers	27,121,040	44.82	70.5	26,493,308	43.27	73.0	27,972,575	44.35	72.1	25,993,897	40.70	72.1	26,232,944	40.42	72.3
State contribution	6,860,896	11.34	17.9	5,608,311	9.16	15.4	6,314,578	10.01	16.3	5,838,034	9.14	16.2	5,899,219	9.09	16.2
Contribution of local authorities	3,811,125	6.30	9.9	3,723,279	6.09	10.3	3,941,776	6.25	10.2	3,640,816	5.70	10.2	3,679,228	5.67	10.1
Other resources	652,703	1.08	1.7	474,232	0.77	1.3	556,339	0.88	1.4	555,301	0.87	1.5	515,726	0.79	1.4
Total	38,445,764	63.54	100.0	36,299,130	59.29	100.0	38,785,268	61.49	100.0	36,028,048	56.41	100.0	36,327,117	55.97	100.0

	1931			1932			1933			1934			1935		
	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.	Absolute figures	Per insured person	Per cent.
Contributions of insured persons (compulsory and voluntary) and employers	25,413,410	39.26	72.2	25,576,846	38.76	74.1	27,430,887	40.25	76.8	29,715,477	41.36	77.1	31,766,922	41.59	74.6
State contribution	5,734,565	8.86	16.3	4,872,457	7.38	14.1	3,748,881	5.50	10.5	4,094,820	5.70	10.6	5,216,211	6.83	12.3
Contribution of local authorities	3,577,925	5.53	10.1	3,593,043	5.45	10.4	3,547,510	5.21	9.9	4,077,525	5.67	10.6	5,175,046	6.77	12.2
Other resources	489,414	0.75	1.4	491,479	0.75	1.4	1,003,080	1.47	2.8	648,201	0.90	1.7	373,335	0.49	0.9
Total	35,215,314	54.40	100.0	34,533,825	52.34	100.0	35,730,358	52.43	100.0	38,536,023	53.63	100.0	42,531,514	55.68	100.0

This table shows the effects of the reduction in the State contribution on the resources of the sickness funds. From 1931 to 1934 this item fell from 16.3 to 10.6 per cent. of their total income.

Benefits

Cash Benefits

Cash benefits are payable to insured persons who are unfit for work (sickness benefit), to insured women and the wives of insured persons during childbirth (maternity benefit), and under certain conditions to the members of an insured person's family (family benefit). The funds also pay funeral benefit.

Sickness benefit is payable to an insured person who is incapacitated for work as a result of sickness as from the fourth day of his illness up to a maximum of thirty-nine weeks for any one illness and not more than twenty-six weeks in the course of any one year. In the case of tuberculosis and cancer, however, benefit may be paid for thirty-nine weeks during one year. If the insured person is admitted to hospital the benefit is withheld, but it may be replaced in certain cases by family benefit. No benefits are paid to public servants or to insured persons whose annual wage is less than 300 crowns. The rate of benefit varies according to the wage group in which the insured person is classified for purposes of contributions. The following table shows the rate of benefit for each wage group.

TABLE VI. RATES OF SICKNESS BENEFIT

Wage groups	Annual wage	Daily sickness allowance
	Crowns	Crowns
I	300 – 600	0.80
II	600 – 1,000	1.40
III	1,000 – 1,500	2.10
IV	1,500 – 2,100	2.80
V	2,100 – 2,800	3.60
VI	over 2,800	4.00

The following table shows the annual expenditure of the sickness funds on sickness benefit from 1926 to 1935; it gives both the total figure and the average expenditure for each insured person.

TABLE VII. EXPENDITURE OF SICKNESS FUNDS ON SICKNESS BENEFIT

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	11,875,772	20.07	1931	8,657,224	13.63
1927	12,586,264	20.97	1932	7,990,954	12.34
1928	12,033,550	19.45	1933	7,636,930	11.41
1929	8,908,635	14.21	1934	7,883,365	11.16
1930	7,915,119	12.43	1935	8,542,192	11.36

The marked decrease in the expenditure on sickness benefits since 1929, which in that year was as much as 27 per cent. as compared with the preceding year, was due mainly to the changes made in the sickness insurance legislation by the Act of 22 June 1928. Under that Act insured persons were classified in different wage groups, and the result was a reduction in the rate of sickness benefit for most insured persons. The rate fixed in 1928 has not changed since that date, and the gradual decrease in the expenditure on sickness benefit since that time must be attributed to other causes. There is reason to believe that the decrease reflects a growing tendency among insured persons to go to hospital rather than to remain at home when ill. This is confirmed by the statistics of the sickness funds, which reveal a decrease in the number of days of sickness benefit from 1929 to 1934 and a parallel increase in the number of days of hospital treatment (cf. Table XII below). The preference shown by the insured persons for hospital treatment is most probably due to improvements in the hospital equipment at their disposal, not only from the point of view of the number of institutions and the number of beds available but also as regards the standard of treatment and of maintenance provided for patients.

The maternity allowance, payable to insured women during childbirth if they have been members of a fund for ten consecutive months or more, is calculated on the same basis as sickness benefit. It is paid for two weeks before and six weeks after childbirth. Insured women who are not entitled to sickness benefit, as also the wives of insured persons, receive a lump sum of 30 crowns in the event of childbirth.

Table VIII (p. 525) shows the expenditure of sickness funds on maternity benefits from 1926 to 1935.

The decrease in the expenditure since 1929 shown in the table may be attributed mainly to the reduction in the rate of sickness benefit introduced by the Act of 1928. The continued decrease from 1929 to 1935 is due in part to the fact that insured women have had

TABLE VIII. EXPENDITURE OF SICKNESS FUNDS ON MATERNITY BENEFIT

(Crowns)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	879,628	1.48	1931	604,291	0.95
1927	795,234	1.32	1932	568,933	0.87
1928	776,144	1.26	1933	523,122 [1]	0.78 [1]
1929	672,765	1.08	1934	525,368 [1]	0.74 [1]
1930	664,875	1.04	1935	524,757 [1]	0.70 [1]

[1] Including expenditure on family benefit when the insured woman enters a maternity hospital.

recourse more frequently to public maternity hospitals (cf. Table XVI below), and in part to the decline in the birth rate in insured families (cf. Table XXII below).

Family benefit is payable to the husband or wife and other persons maintained by an insured person who is undergoing treatment in hospital or other curative establishment or in a maternity hospital. It is equal to 25 per cent. of the sickness benefit if the insured person is responsible for the maintenance of one other person, 50 per cent. if two or three persons are maintained, and 75 per cent. for four or more persons.

The following table shows the expenditure of the sickness funds on family benefit from 1926 to 1935.

TABLE IX. EXPENDITURE OF SICKNESS FUNDS ON FAMILY BENEFIT

(Crowns)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	327,427	0.55	1931	270,965	0.42
1927	380,490	0.64	1932	276,356	0.43
1928	338,837	0.55	1933	276,148 [1]	0.41 [1]
1929	289,456	0.46	1934	283,523 [1]	0.40 [1]
1930	284,782	0.44	1935	302,813 [1]	0.40 [1]

[1] This figure does not include the expenditure on family benefit when an insured woman is admitted to a maternity hospital.

This table, like the two preceding ones, shows a decrease in the expenditure from 1929 onwards as a result of the reduction in the rate of benefit introduced by the 1928 legislation.

Funeral benefit amounts to 75 crowns in the event of the death of an insured person or of the husband or wife of an insured person, and 50 crowns for the death of a child maintained by an insured person.

TABLE X. EXPENDITURE OF SICKNESS FUNDS ON FUNERAL BENEFITS

(Crowns)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	384,132	0.65	1931	418,442	0.66
1927	412,032	0.69	1932	409,041	0.63
1928	418,900	0.67	1933	382,146	0.57
1929	447,700	0.72	1934	399,043	0.56
1930	409,733	0.64	1935	434,460	0.58

Benefits in Kind

The sickness funds provide medical attendance, hospital treatment, physiotherapeutic treatment, dental treatment, obstetrical assistance and transport for patients and doctors.

Medical attendance is available for insured persons, the husbands or wives of insured persons, and children maintained by them (including adopted children) up to the age of 15 years. Children below the age of 7 years maintained by an insured person are entitled not only to medical treatment in cases of sickness but also to treatment for certain congenital infirmities. The right to medical attendance continues from the beginning of the illness until the insured person ceases to be a member of the insurance fund. In the case of voluntary insurance, however, medical attendance is not provided in the case of illness which begins before the end of the sixth week of membership.

Medical attendance is provided in the form of free treatment by one of the doctors with whom the sickness fund has concluded an agreement, but the fund may also merely refund the cost of treatment on the basis of a scale drawn up by the administrative authorities.

Since compulsory sickness insurance was introduced the method of paying doctors' fees has been changed on several occasions. From 1911 to 1916 it was absolutely compulsory for the funds to provide medical attendance, and the doctors' fees were fixed by the doctors

themselves or by their professional organisation. The Act of 1915 empowered the funds in certain circumstances to pay cash benefit instead of providing medical attendance, and groups of funds entered into agreements with doctors prescribing the amount of the doctors' fees. This system lasted until 1922, when a dispute arose between the funds and the doctors with regard to the scale of fees. As a result the funds were permitted from 1922 to 1924 to refund only a part of the doctors' fees on the basis of a scale drawn up by the Ministry of Social Welfare. In 1925 the two parties were able to conclude contracts; but in 1926 the system of refunding the insured person's expenditure had to be re-introduced as a result of the failure of the parties to reach an agreement as to the terms of these contracts. This situation continued until 1932; during that year fresh agreements were signed with the great majority of the funds. Generally speaking this system still remains in force; but it should be noted that no agreements exist between the funds and the doctors in the capital and in several other towns.

The following table shows the expenditure of the funds on medical attendance from 1926 to 1935.

TABLE XI. EXPENDITURE OF SICKNESS FUNDS ON MEDICAL ATTENDANCE

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	9,511,262	16.07	1931	9,192,913	14.47
1927	10,021,825	16.70	1932	9,313,375	14.38
1928	8,791,214	14.20	1933	8,776,956	13.10
1929	9,058,020	14.46	1934	9,748,773	13.42
1930	9,262,915	14.54	1935	10,558,696	14.05

The decrease in the expenditure on medical attendance in 1928 and 1933 was due mainly to changes in the rates for the refund of medical expenses, introduced by the Royal Orders of 21 October 1927 and 10 December 1932.

When an insured person cannot be satisfactorily treated at home, and if conditions permit, free medical treatment and maintenance in a public hospital or similar curative establishment may be provided in place of medical attendance and sickness benefit. [1] Such treatment is provided for the same period as medical attendance.

[1] With regard to family benefit, however, cf. above, pp. 525.

TABLE XII. EXPENDITURE OF SICKNESS FUNDS ON HOSPITAL TREATMENT

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	6,536,092	11.04	1931	8,713,642	13.72
1927	7,014,347	11.69	1932	9,102,763	14.05
1928	7,580,628	12.26	1933	9,857,178	14.72
1929	8,908,006	12.77	1934	10,990,471	15.56
1930	8,356,332	13.13	1935	11,743,762	15.62

The steady increase in the expenditure on hospital treatment is due in part to the growing tendency of insured persons to be treated in hospital and also to the increase in the cost of hospital treatment resulting from the improvements in equipment and methods.

Physiotherapeutic treatment is supplied in accordance with the prescriptions of the medical attendant, both to insured persons and to members of their family. This includes, in particular, special baths, massage, and X-ray or radium treatment.

TABLE XIII. EXPENDITURE OF SICKNESS FUNDS ON PHYSIOTHERAPEUTIC TREATMENT [1]

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	1,309,512	2.21	1931	1,252,854	1.97
1927	1,271,241	2.13	1932	1,176,236	1.82
1928	1,286,855	2.08	1933	1,239,596	1.85
1929	1,085,941	1.73	1934	1,327,539	1.89
1930	1,183,285	1.86	1935	1,482,342	1.97

[1] These figures include the expenditure of the funds on drugs. These are provided only when the patient has been injured in an industrial accident. In such cases, the cost of drugs and of medical benefit is paid by the sickness insurance fund during the first ten days following the accident.

The decrease of more than 200,000 crowns in 1929 was due to a clause of the Act of 22 June 1928, according to which the provision of spectacles and of certain types of bandages was abolished as from the beginning of 1929. The increase in the expenditure from 1932

onwards arose from the fact that more frequent recourse was had to physiotherapeutic treatment.

It is compulsory for the sickness funds to provide dental treatment, but only for the extraction of teeth and then only when the extraction is not for the purpose of providing artificial teeth. The cost of extractions is also paid for members of an insured person's family. When the reserve fund of a sickness fund amounts to more than 25 crowns net per member, dental benefit for the treatment of teeth may also be paid. Table XIV shows the expenditure under this heading.

TABLE XIV. EXPENDITURE OF SICKNESS FUNDS ON DENTAL BENEFIT

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	740,497	1.25	1931	782,795	1.23
1927	831,541	1.38	1932	909,467	1.41
1928	723,667	1.17	1933	1,002,846	1.50
1929	24,755	0.04	1934	1,159,182	1.64
1930	1,767	0.00	1935	1,283,004	1.71

The practically complete cessation of the payment of dental benefit in 1929 and 1930 was due to the fact that the Act of 22 June 1928 abolished the provision of dental care to insured persons as from the beginning of 1929. (The expenditure in 1929 and 1930 was for dental treatment provided before the Act of 1928 came into force.) The Act of 6 June 1930 re-introduced dental benefit as from 1931.

Obstetrical assistance is provided for insured women who have been affiliated to a fund for ten consecutive months, and to the wives of insured persons who have been affiliated for the same period. It consists mainly in the attendance of a midwife. [1] Certain funds also provide for the attendance of a nurse at home after the birth of the child.

If it is possible and if conditions in the insured woman's home are not satisfactory, free admission to a maternity hospital may be granted in place of the assistance of a midwife (and of the maternity benefit). [2] The following table shows the expenditure of sickness funds from 1926 to 1935 on the attendance of midwives, including their travelling expenses, and the expenditure for nursing assistance at home.

[1] When it is thought necessary by the midwife, an insured woman is entitled to medical attendance during childbirth.

The cost of this is included in the figures for the expenditure on medical attenddance (cf. Table XI above).

[2] With regard to family benefit, however, cf. above, pp. 525.

TABLE XV. EXPENDITURE OF SICKNESS FUNDS ON OBSTETRICAL ASSISTANCE (ATTENDANCE OF MIDWIVES)

(Crowns)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	563,018	0.95	1931	396,024	0.62
1927	472,432	0.78	1932	383,287	0.57
1928	451,830	0.74	1933	329,911	0.49
1929	423,492	0.67	1934	333,587	0.47
1930	426,214	0.67	1935	331,371	0.44

The next table shows the expenditure of the funds on the admission of insured women and the wives of insured men to public maternity hospitals from 1926 to 1935.

TABLE XVI. EXPENDITURE OF SICKNESS FUNDS FOR THE ADMISSION OF WOMEN TO PUBLIC MATERNITY HOSPITALS

(Crowns)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	156,136	0.27	1931	214,816	0.34
1927	146,691	0.25	1932	239,874	0.38
1928	163,923	0.26	1933	292,556	0.44
1929	175,209	0.28	1934	328,711	0.47
1930	205,002	0.33	1935	379,561	0.50

Tables XV and XVI show that, during the ten years they cover, the expenditure on sickness benefit decreased steadily, whereas since 1927 the expenditure on the admission of insured women to public maternity hospitals has increased. This reflects the growing tendency among women to claim admission to a maternity hospital. This is in accordance with the preference shown by insured persons in general for hospital treatment and may be explained by the increase in the number of maternity hospitals and in the number of beds available, as well as by the improvement in the standard of treatment.

In Norway, where there are extensive areas which are very sparsely populated, the question of the transport of the patient to the

doctor and of the doctor to the patient is extremely important. Consequently, the legislation provides that sickness funds must pay the cost of transport of the doctor to the sick person's domicile, at rates fixed by the National Insurance Office, if the patient is not in a condition to visit the doctor's consulting room, and also the cost of transport of the patient to the doctor's consulting room or to hospital, if the patient or the employer cannot reasonably be expected to pay the sums in question.

The following table shows the expenditure of the sickness funds from 1926 to 1935 on the transport of doctors and patients.

TABLE XVII. EXPENDITURE OF SICKNESS FUNDS ON THE TRANSPORT OF PATIENTS AND DOCTORS

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	1,422,433	2.41	1931	1,472,775	2.31
1927	1,458,227	2.42	1932	1,501,833	2.32
1928	1,278,149	2.06	1933	1,593,410	2.38
1929	1,387,834	2.22	1934	1,779,615	2.51
1930	1,476,227	2.32	1935	1,977,008	2.63

Administrative Expenses

Each sickness fund pays its own administrative expenses. The total expenditure of all the sickness funds from 1926 to 1935 was as follows :

TABLE XVIII. ADMINISTRATIVE EXPENSES OF SICKNESS FUNDS

(*Crowns*)

Year	Total expenditure	Per insured person	Year	Total expenditure	Per insured person
1926	3,242,582	5.48	1931	3,030,959	4.77
1927	3,074,280	5.12	1932	2,981,515	4.60
1928	3,061,154	4.95	1933	2,991,029	4.47
1929	3,041,656	4.85	1934	3,013,547	4.27
1930	3,001,908	4.71	1935	3,109,730	4.14

The marked decline in the administrative expenses per insured person must be attributed mainly to the increased membership of insurance funds during the period under consideration (cf. Table I above).

The cost of the central administration of the insurance scheme, which is borne by the National Insurance Office, is in principle covered by the State. Parliament may, however, decide that the expenditure will be paid in whole or in part out of the Equalisation Fund. As a result of Parliamentary decisions, the central administrative expenses were paid out of that Fund from 1929 to 1935 up to the following amounts :

	Crowns		Crowns
1929	120,000	1933	128,300
1930	120,000	1934	128,300
1931	126,584	1935	128,300
1932	130,600		

Reserve Funds and Equalisation Fund

The legislation provides that if the final accounts of the sickness funds show a surplus of income over expenditure, the surplus must be paid into the reserve fund, which is intended to meet possible deficits. Generally speaking, the rates of contribution to each fund must be fixed so as to permit the fund to have a surplus to be placed to reserve every year. The following table shows the net total of the reserve funds of the sickness funds from 1926 to 1935, and their total income and expenditure during the same period.

TABLE XIX. NET TOTAL OF RESERVE FUNDS ON 31 DECEMBER AND TOTAL INCOME AND EXPENDITURE OF SICKNESS FUNDS

(Crowns)

Year	Net total reserve funds (000's omitted)	Per insured person	Total income (000's omitted)	Per insured person	Total expenditure (000's omitted)	Per insured person	Surplus or deficit per insured person
1926	17,069	28.21	38,396	63.46	38,025	62.85	+ 0.61
1927	13,668	22.32	36,273	59.24	39,775	64.47	— 5.72
1928	14,513	23.01	39,033	61.88	38,147	60.47	+ 1.41
1929	15,313	23.98	35,191	55.10	34,416	53.89	+ 1.21
1930	17,606	27.13	36,478	56.20	34,184	52.67	+ 3.54
1931	16,733	25.85	35,414	54.71	36,269	56.03	— 1.32
1932	15,197	23.03	34,688	52.57	36,227	54.90	— 2.33
1933	14,987	21.99	35,730	52.43	36,051	52.90	— 0.47
1934	14,711	20.47	38,536	53.63	38,822	54.03	— 0.40
1935	12,956	17.24	41,645	55.40	42,540	56.59	— 1.19

This table shows that during the period under review the total reserve funds decreased by more than 6,000,000 crowns. This was due to the deficits shown by the funds as a whole in 1927 and from 1930 to 1935.

The Equalisation Fund established by the National Insurance Office is intended to assist sickness funds which are in financial difficulties. It may grant loans with or without interest, or even a non-repayable advance when the deficit of the funds is due to an exceptionally-high morbidity rate. The Equalisation Fund was established by means of an annual deduction equal to 20 per cent. of the normal State contribution from 1911 to 1924. Since 1925, the Fund has grown simply as a result of the interest earned on the invested capital. The following table shows the balance in hand of the Fund, in absolute figures and per insured person, from 1926 to 1935, and the amount of the loans without interest granted to sickness funds.

TABLE XX. BALANCE OF THE EQUALISATION FUND AND TOTAL LOANS WITHOUT INTEREST OUTSTANDING ON 31 DECEMBER

(Crowns)

Year	Balance of the fund		Total loans without interest to sickness funds	
	Absolute figures	Per insured person	Absolute figures	Per insured person
1926	8,400,732	14.20	968,620	1.64
1927	8,416,389	14.02	1,697,287	2.83
1928	8,596,824	13.89	2,006,511	3.24
1929	8,692,708	13.87	2,183,803	3.48
1930	8,878,940	13.94	1,783,089	2.80
1931	9,051,552	14.25	1,348,149	2.12
1932	9,209,490	14.22	1,475,150	2.28
1933	9,438,187	14.10	1,718,869	2.57
1934	9,554,092	13.52	1,948,300	2.76
1935	9,639,137	12.82	2,392,400	3.18

It will be seen that the total amount of the loans granted increased considerably in 1927 and from 1931 to 1935. During that period, as was shown in Table XIX, the final accounts of the funds showed a more or less extensive deficit.

Statistics of Morbidity, Births and Deaths

The morbidity statistics compiled on the basis of the information supplied by the sickness funds show the number of cases of sickness notified, the number of days for which benefit was paid, and the number of days of hospital treatment paid for by the insurance fund every year. The statistics do not show the nature of the diseases for which benefits were paid. The following table contains the above-mentioned information for the years 1926 to 1935.

TABLE XXI. MORBIDITY STATISTICS OF SICKNESS INSURANCE FUNDS

Year	Cases of sickness notified		Days of sickness for which benefit was paid		Days of hospital treatment	
	Absolute figures	Per insured person	Absolute figures	Per insured person	Absolute figures	Per insured person
1926	191,547	0.32	4,688,169 [1]	7.92 [1]	—	—
1927	218,734	0.36	5,114,793 [1]	8.52 [1]	—	—
1928	207,256	0.33	5,242,458 [1]	8.47 [1]	—	—
1929	201,602	0.32	3,982,180	6.35	1,070,952	1.71
1930	185,356	0.29	3,761,758	5.91	1,096,277	1.72
1931	199,144	0.31	4,101,630	6.46	1,120,164	1.76
1932	193,522	0.30	3,948,082	6.10	1,148,500	1.77
1933	201,046	0.30	3,873,084	5.78	1,235,733	1.85
1934	212,901	0.30	4,078,048	5.77	1,253,270	1.77
1935	227,625	0.30	4,421,527	5.88	1,382,817	1.84

[1] These figures also include days of hospital treatment.

The above table shows that the number of cases of sickness per insured person did not change to any marked extent during the period under review. The data concerning the number of days for which benefit was paid tend to indicate a comparative decrease from 1929 to 1935, whereas the number of days of hospital treatment per insured person rose from 1.71 to 1.84 during these years. This confirms the tendency already mentioned for insured persons to prefer hospital treatment to treatment at home.

The next table shows the number of births in respect of which benefits were paid (to insured women and the wives of insured men) from 1926 to 1935.

TABLE XXII. NUMBER OF BIRTHS

Year	Absolute figures	Per 1,000 insured persons	Year	Absolute figures	Per 1,000 insured persons
1926	26,112	44.12	1931	22,195	34.93
1927	24,064	40.09	1932	21,119	32.61
1928	23,928	38.67	1933	19,841	29.63
1929	23,007	36.72	1934	20,555	29.09
1930	23,411	36.76	1935	20,896	27.80

These figures show a marked decline in the birth rate among the insured population during the years under consideration. During the same period, the birth rate per thousand inhabitants for the population of the country as a whole fell from 19.60 to 14.55.

The following table indicates the number of deaths in respect of which funeral benefit was paid from 1926 to 1935 (deaths of insured persons and the husbands or wives of insured persons or of their children below the age of 15) in absolute figures and per thousand insured persons.

TABLE XXIII. MORTALITY STATISTICS OF SICKNESS INSURANCE FUNDS

Year	Absolute figures	Per 1,000 insured persons	Year	Absolute figures	Per 1,000 insured persons
1926	5,673	9.59	1931	6,121	9.63
1927	6,073	10.12	1932	5,983	9.24
1928	6,150	9.94	1933	5,578	8.33
1929	6,572	10.49	1934	5,783	8.18
1930	6,027	9.46	1935	6,277	8.35

These figures show a decline in the death rate among the insured population. The death rate per thousand inhabitants for the population as a whole fell from 10.83 to 10.21 during the same period.

STATISTICS

Quarterly Statistical Tables

The following tables, which are published at quarterly intervals, give a survey of statistics on employment and unemployment, hours of work, wages, and cost of living, in countries for which regular statistics are available. Yearly averages are given for the years 1927 onwards and monthly (or quarterly) data for the last thirteen months. These figures have been compiled by the International Labour Office from figures published, or communicated, by the statistical authorities of the various countries. In a few cases, statistics compiled by non-official bodies have been used. The series showing index numbers on the base 1929 = 100 have for the most part been computed by the Office. The figures are the latest available at the time of going to press, but are in some cases provisional and subject to revision. Unless otherwise indicated, the monthly and quarterly figures refer to the end of the period ; figures published relating to the first of the month (or quarter) are shown against the preceding month (or quarter).

It should be emphasised that in view of the diversity in the scope and methods of compilation of these statistics, international comparisons are difficult and possible only with considerable reservations ; the statistics, however, generally give a reliable picture of fluctuations in time, and it is between these that comparisons can most usefully be made.

Notes on the sources and methods of compilation of the statistical series contained in these tables were given in the *I.L.O. Year-Book*, 1934-35, Vol. II : *Labour Statistics ;* information on new series introduced since the publication of this *Year-Book* is given in the *Year-Book of Labour Statistics*, 1937, and in notes at the end of each issue of these tables.

In order that the French and English editions of these tables may be uniform, the countries are arranged in alphabetical order of their French titles. Thus, to take two important countries, whose order is different in the two languages, Germany appears under the letter A (*Allemagne*) and the United States under the letter E (*Etats-Unis*).

EXPLANATION OF SIGNS USED IN THE TABLES

The sign * signifies : " no figures exist ".
" — " " figures not yet received ".
" † " " provisional figure ".
" r " " figure revised since the previous issue ".
" o " " branches relating to men only " (wages table only).
Figures in thick-faced type : base of the index numbers.
Figures in italics : index numbers with a year other than 1929 as base.
Figures in brackets : index numbers subject to certain reservations (see the introduction to each table).
The sign —— between two figures of a series signifies that the former series is replaced by another, or otherwise modified.

Employment and Unemployment

Tables I and II give statistics on the *general level of employment* and the *general level of unemployment*. As these series purport to measure different aspects of the same phenomenon, the two tables should be read in conjunction. Figures for the different industries or occupations covered by these series are given in the *Year-Book of Labour Statistics*, 1937, which also gives figures for unemployment among males and females where available.

Employment (Table I). The employment series relate to persons in employment or to hours worked, and may be classified roughly in two groups : (1) those (the majority) based on employers' returns, indicating changes in the number of workers employed or hours worked in a sample of mainly industrial establishments ; they do not furnish information on the absolute extent of employment, and as a rule only *index numbers* are reproduced here ; (2) those based on returns of employed members in various schemes of social insurance (usually compulsory) and covering the great majority of the working population ; as these series give a more reliable picture of changes in the total level of employment, absolute figures are generally given, as well as index numbers. In the great majority of cases, the figures relate to workers recorded as in employment at a certain date, irrespective of the hours worked per day or per worker, though in some cases they relate to the number of hours worked during a certain period and thus record fluctuations in the *volume* of employment.

Owing to differences in scope and methods of compilation and classification of the various series, international comparisons of the absolute level of employment and its fluctuations are rarely possible. The chief value of the statistics is in indicating the trend of short-period fluctuations.

(Text continued on page 545.)

TABLE I. STATISTICS OF EMPLOYMENT[1]

Date	Germany			Austria	Belgium [2]	Canada [3]	Denmark	
	Sickness insurance statistics	Statistics of establishments		Sickness insurance statistics	Unemployment insurance statistics	Statistics of establishments	Statistics of establishments	
		Employment as percentage of possible number of:					Total number of hours worked per day [4]	
	Number employed	Workers	Hours of work	Number employed	Index (1929)	Index (1926)	Number (thousands)	Index (1931)
1927	*	*	*	1,376,049	100.0	88.1	*	*
1928	17,436,100	74.5 [5]	70.5 [5]	1,446,027	100.2	94.2	*	*
1929	17,595,347	70.4	67.4	1,448,845	**100.0**	**100.0**	*	*
1930	16,408,528	61.2	56.2	1,378,330	96.6	94.5	*	*
1931	14,336,418	50.7	44.5	1,255,353	87.4	85.3	962	**100.0**
1932	12,517,882	41.9	35.7	1,107,256	78.2	72.5	881	*91.6*
1933	13,015,614	46.3	41.0	1,022,942	81.1	70.6	985	*102.4*
1934	15,040,852	58.5	53.7	1,010,993	78.3	80.9	1,092	*113.5*
1935	15,949,332 [5]	63.9	58.6	967,330 [4]	79.9	83.7	1,185	*123.2*
1936	17,105,771	69.1	65.0	935,411	85.3	87.3	1,175†	*122.1*†
1936 Aug.	17,895,919	71.6	66.6	978,483	88.3	89.8	1,292	*134.3*
Sept.	17,886,222	72.4	68.3	977,006	88.8	92.4	1,300	*135.1*
Oct.	17,785,115	72.4	68.9	969,426	89.4	93.1	1,310	*136.2*
Nov.	17,597,812	72.3	69.9	940,644	87.6	92.4	1,287	*133.8*
Dec.	16,954,844	71.0	68.4	881,692	84.9	87.1	1,244	*129.3*
1937 Jan.	16,599,462	69.4	64.7	866,157	85.0	87.3	1,189	*123.6*
Feb.	17,014,107	69.6	65.6	877,691	86.5	86.2	1,219	*126.6*
March	17,497,362	71.7	69.0	921,911	88.3	86.4	1,252	*130.1*
April	18,447,733	74.3	72.3	969,236	89.9	89.2	1,283	*133.4*
May	18,776,446	75.2	73.1	1,003,492	90.0	95.9	1,335	*138.8*
June	18,941,252	75.9	72.2	1,022,361	90.6	99.9	1,330	*138.3*
July	19,094,961	76.1	70.8	1,026,249	—	100.7	1,295	*134.6*
Aug.	19,151,000†	76.6	71.9†	1,037,181	—	103.4	1,317	*136.9*
Persons covered	*	*	*	*	906,910 [6]	1,174,041 [7]	*	*

Date	Estonia [7]	United States					
	Statistics of establishments	Statistics of establishments [10] (Manufacturing industries)					
		Index (1923-1925)				Estimates of:	
		Number employed		Hours worked	Payrolls	Wage earners employed	Weekly payrolls ($1,000's)
	Index (1 Jan.1927)	Unadjusted	Adjusted				
1927	93.0	94.5	*	95.1	93.2	8,288,400	206,980
1928	98.2	94.3	*	95.5	93.9	8,285,800	208,334
1929	**100.0**	**100.0**	*	**100.0**	**100.0**	8,785,600	221,937
1930	95.8	87.2	*	80.7	81.1	7,668,400	180,507
1931	88.1 [8]	73.8	*	62.9	61.8	6,484,300	137,256
1932	82.7	62.6	*	46.1	42.5	5,374,200	93,757
1933	84.3	68.8	*	52.8	45.3	5,778,400	98,623
1934	97.5	78.8	*	57.7	57.6	6,605,600	126,000
1935	109.7	82.1	*	63.6	65.4	6,968,500	143,180
1936	126.3	87.8	*	72.4	75.5	7,541,800	165,699
1936 Aug.	125.2	89.3	89.2	74.2	76.5	7,461,500	165,099
Sept.	128.1	91.2	89.6	74.4	76.6	7,980,800	169,489
Oct.	129.0	92.4	90.2	78.9	81.6	8,081,100	180,580
Nov.	130.4	92.6	91.9	79.4	83.1	8,100,300	183,983
Dec.	127.4	93.7	94.2	81.2	87.3	8,220,000	193,389
1937 Jan.	135.4	92.2	94.4	77.0	83.1	8,082,000	184,271
Feb.	135.1	94.6	95.2	80.6	87.8	8,291,200	194,699
March	138.6	96.6	96.4	83.6	92.7	8,467,700	205,602
April	143.9	97.5	97.0	83.1	96.2	8,553,000	213,213
May	153.8	97.7	97.6	82.1	96.4	8,566,400	213,835
June	156.2	96.6	96.8	79.9	94.3	8,477,100†	209,047†
July	149.4	96.8 [9]	98.4 [9]	77.4†	92.0 [9]	—	—
Aug.	146.2	97.6†	97.7†	79.4†	95.1†	—	—
Persons covered	52,762	4,938,998 †				*	*

[1] The figures in brackets after the word " Index " denote the original base period of the series. When they are in heavy type this base has been retained (= 100) ; in all other cases the series have been recalculated on the base 1929 = 100. [2] Since November 1935, including the Saar Territory. [3] Figure for July. [4] Since May 1935, excluding voluntarily insured. [5] During the month. [6] Workers covered by the statistics, including unemployed. [7] The figures relate to the 1st of the following month. [8] The monthly figures are more restricted in scope than the yearly figures. [9] Since January 1931, excluding " building ". [10] The figures relate to the 15th of the month.

TABLE I. STATISTICS OF EMPLOYMENT [1] (*cont.*)

Date	Finland [2]		France		Great Britain		Hungary	
	Statistics of establishments		Returns of labour inspectors		Unemployment insurance statistics		Social insurance statistics	
	Index (1926)		Index (same month of 1930)					
	Number employed	Hours worked	Number employed [3]	Hours worked	Estimated number employed	Index (1924)	Number employed	Index (1927)
1927	99.5	98.6	*	*	10,018,000	98.0	1,033,609	98.3
1928	103.1	104.6	*	*	10,023,000	98.0	1,064,599	101.3
1929	100.0	100.0	*	*	10,223,000	100.0	1,051,169	100.0
1930	87.0	81.9	100.0	100.0	9,809,000	96.0	990,776	94.3
1931	77.5	71.1	*92.5*	*83.6*	9,437,000	92.3	937,298	89.2
1932	77.6	71.9	*80.9*	*73.6*	9,367,000	91.7	862,469	82.0
1933	83.1	77.6	*79.4*	*74.3*	9,684,000	94.8	853,203	81.1
1934	93.2	88.0	*76.9*	*71.4*	10,142,000	99.2	913,068	86.8
1935	101.4	97.6	*73.5*	*68.1*	10,386,000	101.6	958,234	91.2
1936	101.8	98.2	*74.1*	*70.5*	10,902,000	106.7	1,026,510	97.7
1936 Aug.	*	*	*75.0*	*71.7*	11,074,000	108.3	1,059,842	100.8
Sept.	*	*	*75.1*	*72.4*	11,086,000	108.5	1,058,704	100.7
Oct.	102.9	99.7	*75.2*	*72.5*	11,112,000	108.7	1,070,579	101.9
Nov.	*	*	*75.0*	*72.0*	11,125,000	108.9	1,055,385	100.4
Dec.	*	*	*75.4*	*71.9*	11,141,000	109.0	1,004,722	95.6
1937 Jan.	102.2	100.0	*75.0*	*67.6*	11,118,000	108.8	1,008,849	96.0
Feb.	*	*	*75.3*	*66.7*	11,189,000	109.4	1,033,323	98.3
March	*	*	*76.1*	*66.1*	11,252,000	110.1	1,051,105	100.0
April	104.8	102.9	*76.8*	*64.8*	11,413,000	111.7	1,107,965	105.4
May	*	*	*77.7*	*64.3*	11,416,000	111.7	1,126,928	107.2
June	*	*	*78.4*	*64.0*	11,519,000	112.7	1,098,041	104.4
July	115.5	110.5	*80.7*	*65.5*	11,523,000	112.7	1,102,963	104.9
Aug.	*	*	*79.7*	*65.9*	11,566,000	113.2	—	—
Persons covered	67,188	5,959,764	2,248,324		*	*	*	*

Date	Italy			Japan	Latvia		Luxemburg [7]	
	Statistics of establishments			Statistics of establishments	Sickness insurance statistics		Statistics of establishments	
	Index [4] (1934)	Index [5] (1929)		Index (1926)	Number employed	Index (1930)	Number employed	Index (1929)
		Number employed	Number of hours worked					
1927	*	*	*	104.1	148,288 [6]	87.4 [6]	41,129	93.6
1928	*	*	*	99.2	161,483	94.7	42,927	97.7
1929	*	100.0	100.0	100.0	171,195	100.0	43,944	100.0
1930	*	97.3	94.2	90.0	179,636	105.3	43,122	98.1
1931	*	88.8	83.5	81.7	166,939	97.9	36,942	84.1
1932	*	78.5	72.4	82.0	141,296	83.2	29,696	67.6
1933	*	79.4	75.1	89.9	150,236	88.4	28,483	64.8
1934	100.0	82.9	77.8	100.2	162,837	95.8	28,803	65.5
1935	117.1	94.0	81.0	109.7 [7]	172,615	101.1	29,334	66.8
1936	121.6	94.9	81.0	115.8	183,291	107.4	30,255	68.8
1936 Aug.	116.8	97.8	79.3	116.6	186,714	109.5	30,772	70.0
Sept.	122.6	102.2	89.9	117.6	186,341	109.5	30,729	69.9
Oct.	125.0	99.6	87.1	118.0	190,250	111.6	30,819	70.1
Nov.	127.2	98.4	82.5	118.7	193,740	113.7	30,521	69.5
Dec.	127.9	95.4	80.8	119.1	188,050	110.5	30,461	69.3
1937 Jan.	127.7	93.7	76.2	119.6	185,146	108.4	30,649	69.7
Feb.	130.6	95.7	80.5	120.7	185,755	108.4	30,757	70.0
March	133.4	100.7	87.9	122.7	187,908	110.5	31,829	72.4
April	135.1	102.9	90.2	127.8	193,173	112.6	32,430	73.8
May	134.4	105.3†	91.7†	128.5	196,736 [7]	115.8	33,058	75.2
June	132.7	106.1†	94.9†	129.1	199,553 [7]	116.8	33,492	76.2
July	132.8	—	—	—	202,757†	118.9	34,110	77.6
Aug.	—	—	—	—	—	—	34,345	78.2
Persons covered	1,068,664	1,445,060†		1,264,253	*	*	*	*

[1] The figures in brackets after the word " Index " denote the original base period of the series. When they are in heavy type this base has been retained (= 100); in all other cases the series have been recalculated on the base 1929 = 100. [2] Figures for the first month of each quarter. [3] The figures relate to the first of the month. [4] Ministry of Corporations. The figures relate to the last week of each month. [5] Fascist General Industrial Confederation. [6] Figures for 1927-1930 : yearly averages, based on average number insured each month. [7] The figures relate to the first of the following month.

TABLE I. STATISTICS OF EMPLOYMENT [1] (*concluded*)

Date	Norway			Netherlands [4]	Poland		Sweden [7]
	Statistics of establishments			Unemployment insurance statistics	Statistics of establishments		Statistics of establishments
	Index (September 1935)				Index		Social Board
	All industries	Manufacturing industries		Index (1929)	Number employed (1928) (all industries)	Hours worked per week (1928) (manufactures)	Index (1926-1930)
	Number employed [2]		Hours worked [3]				
1927	*	*	*	98.3	*	*	*
1928	*	*	*	100.3	99.0	101.9	*
1929	*	*	*	**100.0**	**100.0**	**100.0**	*
1930	*	*	*	98.0	87.2	82.9	*
1931	*	*	*	90.5	74.5	69.3	*
1932	*	*	*	79.4	64.1	56.9	*
1933	*	*	*	77.7	63.8	58.3	*89.1*
1934	*	*	*	76.5	69.1	67.2	*97.4*
1935	*	*99*	*101*	72.6	72.8	72.7	*103.1*
1936	*101*	*104*	*108*	71.5	77.8	78.0	*108.7*
1936 Aug.	*	*	*	73.4	81.6	80.9	*
Sept.	*105*	*106*	*110*	73.3	82.9	85.4	*111.1*
Oct.	*	*	*	73.2	87.2	87.7	*
Nov.	*	*	*	73.1	83.8	89.9	*
Dec.	*104*	*108*	*113*	71.5	76.0	81.8	*109.8*
1937 Jan.	*	*	*	69.8	75.2	73.9	*
Feb.	*	*	*	72.4	77.9	78.5	*
March	*101*	*106*	*110*	74.9	81.0	82.2	*111.8*
April	*	*	*	78.1	85.4	86.4	*
May	*	*	*	80.2	88.1	88.7	*
June	*107*	*111*	*110*	81.4	89.7	90.3	119.3
July	*	*	*	80.9	91.0 [5]	88.9	*
Aug.	*	*	*	81.3†	93.3†	95.5	*
Persons covered	200,700	101,600		466,066† [8]	800,674†	25,594 [6]	266,590

Date	Switzerland	Czechoslovakia [8]		Union of South Africa		Yugoslavia	
	Statistics of establishments	Social insurance statistics		Statistics of establishments		Social insurance statistics	
	Index (1925)	Number employed	Index (1928)	Index (July 1925)		Number employed	Index (1928)
				Europeans	Total [9]		
1927	91.2	*	*	94.2	95.9	510,321	84.4
1928	97.3	2,488,000	99.3	97.2	98.2	565,798	93.5
1929	**100.0**	2,506,000	**100.0**	**100.0**	**100.0**	605,064	**100.0**
1930	96.5	2,446,000	97.6	97.4	98.1	631,182	104.4
1931	88.5	2,313,000	92.4	93.5	93.8	609,262	100.7
1932	76.1	2,069,000	82.6	87.6	87.2	537,238	88.9
1933	73.0	1,888,000	75.4	90.3	91.2	520,980	86.2
1934	73.3	1,879,000	75.0	100.3	102.3	543,566	89.9
1935	70.2	1,919,000	76.6	109.7	114.1	564,288	93.3
1936	70.1	2,063,000	82.3	117.6	124.8	616.211	101.9
1936 Aug.	*	2,209,947	88.2	118.6	125.5	644,093	106.5
Sept.	69.6	2,223,483	88.8	119.3	126.4	651,649	107.7
Oct.	*	2,234,184	89.2	119.6	126.9	646,300	106.8
Nov.	*	2,206,696	88.1	119.9	126.7	656,962	108.6
Dec.	72.2	2,035,226	81.2	120.3	127.5	635,499	105.1
1937 Jan.	*	1,880,357	75.1	120.7	128.6	596,965	98.7
Feb.	*	1,913,310	76.4	122.0	131.1	606,786	100.3
March	75.5	1,999,822	79.8	123.6	132.4	641,131	106.0
April	*	2,192,168	87.5	124.2	133.0	661,562	109.4
May	*	2,344,558	93.5	124.9	132.7	692,973 [7]	114.5
June	79.0	2,424,967	96.8	125.3	131.6	713,835	118.1
July	*	2,425,310	96.8	—	—	—	—
Aug.	*	2,426,168	96.8	—	—	—	—
Persons covered	225,685	*	*	*	*	*	*

[1] The figures in brackets after the word "Index" denote the original base period of the series. When they are in heavy type this base has been retained (= 100); in all other cases the series have been recalculated on the base 1929 = 100. [2] The figures relate to about the 15th of each month. [3] During the week preceding the 15th of each month. [4] During the month. [5] Workers covered by the statistics, including unemployed. [6] Hours worked (thousands). [7] Quarterly averages. [8] Average for the month. [9] Including "Natives".

TABLE II. STATISTICS OF UNEMPLOYMENT

Date	Germany			Australia		Austria		
	Employment exchange statistics			Trade union returns		Unemployment insurance statistics		Employment exchange statistics
	Applicants for work registered	Unemployed registered		Unemployed		Unemployed in receipt of benefit		Applicants for work registered
		Number	Per cent.	Number	Per cent.	Number	Per cent.	
1927	*	1,353,000[2]	*	31,032	7.0	172,450	13.6	200,112
1928	*	1,353,000[2]	*	45,669	10.8	156,185	12.1	182,444
1929	1,919,917[1]	1,891,956	*	47,359	11.1	164,477	12.3	192,062
1930	3,130,082	3,075,580	*	84,767	19.3	208,389	15.0	242,612
1931	4,618,537	4,519,704	23.7	117,866	27.4	253,368	20.3	300,223
1932	5,703,088	5,575,492	30.1	120,454	29.0	309,968	26.1	377,894
1933	5,083,140	4,804,428	25.8	104,035	25.1	328,844	29.0	405,741
1934	3,306,628	2,718,309[4]	14.5[4]	86,865	20.5	287,527	26.3	370,210
1935	2,567,523[3]	2,151,039[4]	11.6[3]	71,823	16.5	261,768	23.4	348,675
1936	1,889,626	1,592,655	8.1	53,992	12.2	259,185	22.9	349,663
1936 Sept.	1,287,179	1,035,237	5.3	*	*	217,211	19.3	303,981
Oct.	1,301,976	1,076,469	5.6	*	*	228,624	20.2	317,201
Nov.	1,428,137	1,197,140	6.2	46,863	10.7	257,063	22.8	341,008
Dec.	1,698,129	1,478,862	7.8	*	*	290,452	25.2	381,921
1937 Jan.	2,052,483	1,853,460	9.7	*	*	316,050	28.3	407,475
Feb.	1,816,794	1,610,947	8.4	44,004	9.9	309,178	27.6	398,355
March	1,474,031	1,245,338	6.5	*	*	277,126	24.5	367,897
April	1,182,979	960,764	4.8	*	*	239,280	21.0	330,095
May	988,113	776,321	3.9	43,584	9.7	215,176	18.7	303,562
June	844,433	648,421	3.2	*	*	196,067	17.1	281,401
July	748,608	562,892	2.8	*	*	187,360	16.4	272,819
Aug.	691,146	509,257[5]	2.5†	—	—	178,081	15.6	261,840
Sept.	—	469,081	—	*	*	176,308	15.4†	—
Base figure	*	20,160,000†		443,446†		1,144,910†		*

[1] Average for 11 months. [2] Since March 1935, including the Saar Territory. [3] Figures calculated by the *Institut für Konjunkturforschung*. [4] Since 31 July 1933, not including persons employed in labour camps.

Date	Belgium				Canada			Chile
	Unemployment insurance statistics				Trade union returns		Employment exchange statistics	Employment exchange statistics
	Percentage unemployed [1]		Unemployed (daily average during the month)	Days of unemployment per month [2]	Unemployed		Applicants for work registered	Applicants for work registered
	Wholly	Partially			Number	Per cent.		
1927	1.8	3.9	16,103	361,185	8,142	4.9	13,541	*
1928	0.9	3.5	11,317	253,848	8,120	4.5	12,758	*
1929	1.3	3.0	12,636	283,434	11,488	5.7	14,996	*
1930	3.6	7.9	36,102	809,775	22,873	11.1	33,008	*
1931	10.9	16.9	110,392	2,476,071	33,625	16.8	69,719	29,345
1932	19.0	20.7	210,575	4,723,170	38,777	22.0	75,140	107,295
1933	17.0	17.2	210,007	4,710,445	33,488	22.3	81,809	71,805
1934	19.0	17.2	234,730	5,264,969	28,320	18.2	88,888	30,055
1935	17.9	12.8	211,533[3]	4,835,337	25,336	15.4	84,050	10,672
1936	13.4	10.0	154,531	3,631,990	23,500	13.2	90,133	6,474
1936 Sept.	11.4	8.5	127,165	3,021,986	19,699	10.9	86,706	5,845
Oct.	10.8	8.0	124,303	2,951,688	20,322	11.0	99,505	5,737
Nov.	12.1	10.1	141,371	3,360,574	23,287	12.7	104,312	5,516
Dec.	14.4	10.2	159,617	3,793,618	26,546	14.3	93,372	4,786
1937 Jan.	14.5	10.7	163,039	3,881,345	27,379	14.5	99,016	3,774
Feb.	13.7	9.0	148,941	3,546,437	26,001	13.7	99,041	3,115
March	12.4	8.7	131,435	3,128,345	24,314	12.9	101,508	3,916
April	10.8	7.3	113,382	2,695,083	20,958	11.1	100,423	3,165
May	10.6	8.4	108,454	2,575,002	18,583	9.5	91,513	2,721
June	9.5	8.6	102,236	2,421,013	20,522	10.4	85,336	2,522
July	9.3	8.7	102,980	2,439,215	18,093	8.9	85,045	—
Aug.	—	—	108,845†	2,579,215†	15,280†	7.6	76,043	—
Sept.	—	—	—	—	—	—	—	—
Base figure	906,910				201,000†		*	*

[1] Having received a control card during the month. [2] Until April 1935, estimates. [3] Standard month of 24 working days.

TABLE II. STATISTICS OF UNEMPLOYMENT (*cont.*)

Date	Denmark			Danzig (Free City of)	Spain		United States			
	Trade union fund returns		Employment exchange statistics	Employment exchange statistics	Employment exchange statistics		Trade union returns			Employment exchange statistics
							Percentage unemployed [1]			
	Unemployed		Applicants for work registered	Unemployed registered	Unemployed		Weighted	Unweighted		Applicants for work registered
	Number	Per cent.			Wholly	Partially		Wholly	Partially	
1927	61,705	22.5	65,620	*	*	*	*	*	*	*
1928	50,226	18.5	51,864	*	*	*	9.2	13	*	*
1929	42,817	15.5	44,581	12,905	*	*	8.2	12	*	*
1930	39,631	13.7	40,551	18,291	*	*	14.5	21	*	*
1931	53,019	17.9	59,430	24,898	*	*	19.1	26	19	*
1932	99,508	31.7	126,039	33,244	*	*	23.8	32	21	*
1933	97,478	28.8	121,115	31,408	*	*	24.3	31	21	*
1934	81,756	22.1	97,595	20,326	381,278	240,541	20.9	26	24	*
1935	76,195	19.7	92,406	17,983	434,931	262,059	18.5	23	22	7,422,615
1936	78,669	19.3	93,299	13,553	—	—	13.3	17	21	7,681,297
1936 Sept.	53,181	12.9	64,945	8,306	—	—	11.2	13	21	6,837,054
Oct.	67,674	16.3	80,508	9,243	—	—	11.0	12	20	6,887,629
Nov.	83,552	20.0	96,492	10,764	—	—	10.7	12	20	6,832,222
Dec.	127,478	30.3	141,946	14,933	—	—	11.1	14	21	6,300,707
1937 Jan.	140,262	33.0	156,209	16,797	—	—	11.7	15	21	6,273,119
Feb.	133,795	31.4	145,627	16,724	—	—	11.9	14	21	6,115,443
March	122,687	28.6	131,335	14,909	—	—	10.9	13	19	5,490,482
April	74,793	17.5	86,446	8,776	—	—	9.8	12	20	5,519,755
May	63,310	14.8	73,379	6,526	—	—	9.7	11	20	5,309,541
June	60,199	13.9	69,389	4,617	—	—	9.6	11	20	5,016,014
July	66,006	15.2	75,830	3,327	—	—	9.3	11	20	4,938,998
Aug.	65,853	15.1 †	76,391	2,984	—	—	9.3	12†	20	—
Sept.	72,493†	16.6†	84,340	2,910	—	—	9.3†	12†	20	—
Base figure	436,123†		*	*	*	*	964,000			*

[1] Unemployed occupied on public and civil work excluded.

Date	Estonia [1]	Finland		France		Great Britain and Northern Ireland			
	Employment exchange statistics	Employment exchange statistics	Statistics of local unemployment committees	Public relief fund statistics	Employment exchange statistics	Unemployment insurance statistics (16-64 years)			
						Wholly unemployed (including casuals)		Unemployed owing to temporary stoppages	
	Unemployed registered	Unemployed registered	Unemployed	Unemployed in receipt of relief	Applications for work	Number	Per cent.	Number	Per cent.
1927	2,980	1,848	*	33,549	47,289	899,093	7.4	279,744	2.3
1928	2,628	1,724	*	4,834	15,275	980,326	8.2	309,903	2.6
1929	3,172	3,877	*	928	10,052	994,091	8.2	268,410	2.2
1930	3,089	8,009	*	2,514	13,859	1,464,347	11.8	526,604	4.3
1931	3,542	11,495	*	56,112	75,215	2,129,359	16.7	587,494	4.6
1932	7,121	17,351	63,972	273,412 [2]	308,096	2,254,857	17.6	573,805	4.5
1933	8,284	17,139	44,656	276,033	307,844	2,110,090	16.4	456,678	3.5
1934	2,970	10,011	23,802	345,033	376,320	1,801,913	13.9	368,906	2.8
1935	1,779	7,163	13,362	426,931	465,875	1,714,844	13.1	312,598	2.4
1936	1,276	4,796	*	432,120	475,224	1,497,587	11.3	251,379	1.9
1936 Sept.	684	3,086	1,702	408,589	451,439	1,384,090	10.4	236,118	1.7
Oct.	1,285	4,594	3,097	406,595	452,901	1,417,391	10.6	196,370	1.5
Nov.	2,402	5,348	*	407,831	453,821	1,429,736	10.7	191,585	1.5
Dec.	1,988	4,398	*	413,450	447,046	1,424,451	10.7	197,722	1.5
1937 Jan.	2,388	6,805	*	426,072	465,051	1,489,092	11.2	187,874	1.4
Feb.	2,064	5,383	*	410,219	441,207	1,460,026	10.9	164,739	1.3
March	1,801	4,482	*	386,254	415,179	1,406,530	10.5	169,740	1.3
April	1,191	3,554	*	368,381	395,996	1,305,280	9.8	130,788	1.0
May	638	3,126	*	345,503	374,376	1,245,589	9.3	210,401	1.6
June	486	2,076	*	319,161	343,402	1,166,881	8.7	203,329	1.6
July	403	2,089	*	313,553	337,376	1,136,287	8.5	249,345	1.9
Aug.	470	2,794	*	311,315	334,521	1,148,487	8.6	208,941	1.6
Sept.	473	3,450	*	305,341	333,900	1,170,976 [3]	8,8	207,459	1.5
Base figure	*	*	*	*	*	13,338,700			

[1] Until December 1934, the figures relate to the 1st of the following month. Since January 1935, applicants for work registered; the figures relate to the end of the month. [2] From July 1932 onwards, including unemployed in receipt of relief from the welfare offices. [3] There were in addition 20,101 persons unemployed in agriculture aged 16-64 and 18,573 unemployed insured juveniles under 16 years.

TABLE II. STATISTICS OF UNEMPLOYMENT (*cont.*)

Date	Great Britain	Hungary	Netherlands East Indies	Irish Free State [2, 4]		Italy	Japan [7]	
	Employment exchange statistics	Employment exchange statistics	Employment exchange statistics	Employment exchange statistics		Social insurance fund statistics [6]	Official estimates	
				Applicants for work registered			Unemployed	
	Applicants for work registered	Applications for work registered	Applicants for work registered	With claims to unemployment benefit	Total	Wholly unemployed	Number	Per cent.
1927	1,091,271	13,881	*	13,728	21,284	278,484	*	*
1928	1,246,022	14,715	*	14,821	22,487	324,422	*	*
1929	1,237,880	15,173	*	14,679	20,702	300,786	*	*
1930	1,953,935	43,592 [3]	*	16,378	22,398	425,437	369,408	5.3
1931	2,636,805	52,305	6,964	17,852	25,230	734,454	422,755	6.1
1932	2,744,789	66,235	10,922	20,217	62,817 [4]	1,006,442	485,681	6.8
1933	2,520,616	60,595	14,576	19,897	72,255	1,018,955	408,710	5.6
1934	2,159,231	52,157	15,784	20,558	103,671	963,677	372,941	5.0
1935	2,036,422	52,048	17,418	18,410	119,498	*	356,044	4.6
1936	1,754,975	52,114	19,700	16,318	99,834	*	338,365	4.3
1936 Sept.	1,624,339	50,166	19,839	14,312	68,278	*	327,578	4.1
Oct.	1,611,810	50,655	19,737	16,151	71,743	*	322,948	4.1
Nov.	1,623,602	50,371	19,106	16,456	110,859	*	322,969	4.1
Dec.	1,628,719	50,863	18,859	20,423	105,078	*	329,760	4.2
1937 Jan.	1,689,223	54,407	19,316	20,076	100,177	*	333,331	4.2
Feb.	1,627,845	56,192	19,459	20,322	91,680	*	328,528	4.1
March	1,601,201 [1]	56,782	19,005	20,009	93,426	*	315,845	4.0
April	1,454,443	53,865	18,954	18,165	92,363	*	294,561	3.9
May	1,451,330	50,273	17,894	17,754	88,480	*	289,450 †	3.8
June	1,356,598	45,740	18,752	18,469	64,011	*	—	—
July	1,379,459	43,915	—	17,973	63,288	*	—	—
Aug.	1,358,621	45,904	—	18,364	65,670	*	—	—
Sept.	1,388,600	—	—	19,715	68,928	*	—	—
Base figure	*	*	*	*		*	7,617,103	

[1] The extension of the scheme of unemployment assistance resulted in an addition in March of some 20,000 persons to the register. [2] Since January 1930, including non-fee-charging private employment agencies. [3] From 17 April 1935 to 21 May 1935 and from 4 March 1936 to 27 October 1936 fluctuations in numbers are due largely to the special employment period for the occupiers of land of which the rateable value exceeds £4. [4] From 17 July 1935 to 1 October 1935 and from 3 June 1936 to 27 October 1936 fluctuations in numbers are due largely to the special employment period for single men without dependents. [5] Extended series. [6] Since July 1933, employment exchange statistics. [7] The figures relate to the 1st of the following month.

Date	Latvia	Mexico	Norway			New Zealand			Portugal
	Employment exchange statistics	Official estimates	Trade union fund returns		Employment exchange statistics	Employment exchange statistics			Employment exchange statistics
			Unemployed			Unemployed (men)			
	Applications for work registered	Number unemployed	Number	Per cent.	Unemployed [5]	Registered [8]	In full-time subsidised employment (not registered)	Total	Unemployed registered
1927	3,131	*	8,561	25.4	23,889	1,973	*	*	*
1928	4,700	*	6,502	19.2	21,759	2,563	*	*	*
1929	5,617	*	5,902	15.4	19,089	2,895	*	*	*
1930	4,851	75,695 [1]	7,175	16.6	19,353	5,318	*	*	*
1931	8,709	257,979	*	22.3	27,479	41,431	5,000 [6]	*	*
1932	14,587	339,378	14,790	30.8	32,705	51,549	15,000 [6]	*	33,352
1933	8,156	275,774	16,588	33.4	35,591	46,944 [4]	25,719 [4]	72,663 [4]	25,255
1934	4,972	234,522	15,963	30.7	35,121	39,235	25,286	64,521	34,711 [6]
1935	4,825	189,026	14,783	25.3	36,103	38,234	18,477	56,711	42,315
1936	3,851	186,906 [7]	13,267	18.8	32,643	36,890	13,260	50,152	43,057
1936 Sept.	1,283	189,880 [7]	10,535	14.2	28,122	41,908	7,511	49,419	43,412
Oct.	2,015	181,160 [7]	12,635	16.8	31,332	39,056	7,084	46,140	43,546
Nov.	4,025	165,120 [7]	14,330	18.8	35,119	35,467	6,874	42,341	43,073
Dec.	5,613	172,790 [7]	16,632	21.7	36,260	32,286	6,786	39,072	43,054
1937 Jan.	6,358	191,320 †	18,045	23.2	35,435	31,416	6,404	37,820	43,051
Feb.	6,178	193,171	18,163	23.1	34,440	28,941	6,781	35,722	42,964
March	6,110	186,374	18,457	23.2	32,951	27,907	6,619	34,526	42,872
April	3,290	178,566 †	17,561	21.8	31,824	27,953	6,296	34,249	—
May	2,127	—	14,813	18.1	26,298	28,302	5,916	34,218	—
June	1,446	—	13,020 [7]	15.6	22,028	29,326	6,513	35,839	—
July	1,146	—	12,772	15.2	18,572	30,443	8,236	38,679	—
Aug.	1,093	—	—	—	20,045	—	—	—	—
Sept.	—	—	—	—	25,431	—	—	—	—
Base figure	*	*	83,842		*	*			*

[1] Figure for the month of May according to the population census. [2] The figures relate to the 15th of the month. [3] For the period 1927-1932, numbers of unemployed males remaining on registers of Government Labour Bureaux. [4] Since 1933, the figures do not always relate to the end of each month. [5] Estimates. [6] Average for eleven months.

TABLE II. STATISTICS OF UNEMPLOYMENT (*concluded*)

Date	Netherlands				Poland		Sweden		
	Unemployment insurance statistics [1]			Employment exchange statistics	Employment exchange statistics		Trade union returns		Statistics of local unemployment committees
	Unemployed		Days of unemployment	Wholly unemployed registered	Applications for work registered		Unemployed		Applicants for relief registered
	Number	Per cent.	Per cent. [2]		Number	Per cent.	Number	Per cent.	
1927	25,000	9.0	7.5	*	163,953	7.5	31,076	12.0	19,229
1928	20,300	6.8	5.6	*	125,552	5.0	29,716	10.6	16,662
1929	24,300	7.1	5.9	*	129,450	4.9	32,621 [3]	10.7 [3]	10,212
1930	37,800	9.7	7.8	*	226,659	8.8	42,016	12.2	13,723
1931	82,800	18.1	14.8	138,231	299,502	12.6	64,815	17.2	46,540
1932	153,500	29.5	25.3	270,633	255,582	11.8	90,677	22.8	113,907
1933	163,000	31.0	26.9	322,951	249,660	11.9	97,316	23.7	164,773
1934	160,400	32.1	28.0	332,772	342,166	16.3	84,685	18.9	114,802
1935	173,700	36.3	31.7	384,691	381,935	16.7	81,385	16.1	61,581
1936	169,400	36.3	32.7	414,512	367,327	15.6	71,884	13.6	35,601
1936 Sept.	159,689	34.4	31.0	390,091	265,954	11.0	51,965	9.7	20,903
Oct.	157,793	34.0	31.1	394,444	282,239	11.4	60,803	11.3	24,712
Nov.	156,575	33.7	31.2	419,480	339,395	13.8	72,306	13.2	28,742
Dec.	163,381	35.0	32.7	455,209	466,004	19.4	100,278	18.5	30,814
1937 Jan.	172,014	36.9	34.3	466,242	535,563	21.9	91,542	16.4	33,509
Feb.	161,107	34.5	31.9	439,553	547,986	22.0	85,568	15.1	31,280
March	149,115	31.9	29.5	403,365	521,793	20.7	86,102	15.2	27,750
April	133,523	28.5	26.5	359,726	414,974	16.3	69,620	12.2	22,247
May	124,711	26.5	24.5	328,537	331,308	12.8	53,554	9.3	15,840
June	119,325	25.3	23.4	310,616	293,025	11.3†	50,837 [2]	8.8 [2]	11,429
July	122,982	26.0	23.9 [2]	312,907	276,781	10.7†	42,451	7.4	9,800
Aug.	118,683†	25.4†	23.5†	317,800	259,082	10.0†	40,953 †	7.1†	9,577
Sept.	—	—	23.2†	—	—	—	—	—	—
Base figure	466,066†			*	2,589,308†		588,049		218 [4]

[1] Weekly averages. [2] Days of unemployment, as a percentage of the number of days which could have been worked, had there been no unemployment. [3] From 1929 onwards, including forestry workers and timber floaters. [4] Number of relief funds.

Date	Rumania [1]	Switzerland			Czechoslovakia			Yugoslavia
	Employment exchange statistics	Unemployment insurance statistics		Employment insurance statistics	Trade union fund returns		Employment exchange statistics	Employment exchange statistics
	Unemployed registered	Percentage unemployed		Applications for work registered	Unemployed in receipt of benefit		Applicants for work registered	Unemployed registered
		Wholly	Partially		Number	Per cent.		
1927	*	2.7	2.0	11,824	17,617	1.6	52,869	*
1928	10,373	2.1	1.1	8,380	16,348	1.4	38,636	5,721
1929	7,288	1.8	1.7	8,131	23,763	2.2	41,630	8,370
1930	25,335	3.4	7.2	12,881	51,372	4.5	105,442	8,198
1931	35,737	5.9	12.1	24,208	102,179	8.3	291,332	9,930
1932	38,890	9.1 [2]	12.2 [2]	54,366	184,555	13.5	554,049	14,761
1933	29,063	10.8	8.5	67,867	247,613	16.9	738,267	15,997
1934	17,253	9.8	6.1	65,440	245,953	17.4	676,994	15,647
1935	13,852	11.8	5.9	82,468	235,623	15.9	686,269	16,752
1936	13,549	13.2	5.3	93,009	208,539	13.1	622,687	19,436
1936 Sept.	8,852	11.3	5.1	82,962	171,456	10.6	479,268	11,593
Oct.	9,549	11.5	4.3	86,866	166,575	10.3	441,679	13,780
Nov.	11,526	12.3	3.6	96,541	176,658	10.8	510,205	14,239
Dec.	16,224	14.4	3.3	104,842	198,492	12.1	619,143	22,069
1937 Jan.	18,778	16.6	3.3	110,754	210,894	12.9	667,486	35,170
Feb.	19,653	16.0	3.0	105,736	221,464	13.2	677,947	39,510
March	17,392	12.8	2.7	89,346	210,244	12.4	627,258	35,324
April	12,609	9.7	2.2	70,793	176,348	10.3	503,632	24,765
May	10,784	7.2	1.9	57,973	137,677	8.0	385,061	16,936
June	6,396	6.4 [2]	1.9	50,830	113,838	6.6	303,535	11,258
July	5,822	6.6	1.9	49,244	110,861	6.4	248,127	11,543
Aug.	—	—	—	51,892	108,063	6,2	233,318	10,845
Sept.	—	—	—	51,876	—	—	—	12,250
Base figure	*	471,531		*	1,726,000†		*	*

[1] The figures relate to the 1st of the following month. [2] Up to 1931, quarterly statistics; afterwards, monthly statistics.

(Text continued from page 537.)

Unemployment (Table II). The series relate to persons applying for work or recorded as unemployed, and in most cases are incomplete in scope and vary considerably in their representative character: the figures are affected by changes in legislation, in administrative practice, and in the frequency of registration of the unemployed; changes in the amount of " short time ", and other ways of rationing work, also affect the figures; they are also influenced by changes in the population of working age and in the proportion of the population seeking gainful occupation. For these reasons, the figures do not directly show changes in the *time lost* through unemployment.

Their principal value lies in indicating fluctuations from time to time, and only between such movements are international comparisons possible. The various series, however, are not equally sensitive to changes in the labour market, and an equal change in any two series does not necessarily represent a corresponding change in the countries concerned. Percentages are, as a rule, more reliable than absolute numbers as measures of changes in the level of unemployment. The figures of unemployment relate, unless otherwise stated, to wholly unemployed; where available, figures of " partial unemployment " are given, but they are uncertain, incomplete, and based on different definitions, and here also international comparisons are rarely possible.

For explanation of the signs used in the tables, see above, p. 537.

International Index Numbers of Unemployment

The table below and the accompanying graph give *international index numbers of the general level of unemployment.* These index numbers are based on selected series of unemployment statistics for 16 of the most important countries, and are intended to show *relative fluctuations* in the general level of unemployment among industrial workers. They do not measure either the absolute height, or the magnitude of the fluctuations, of unemployment and are subject to the same reservations as those indicated above for the component series. Information as to the countries covered, the method of construction, and the problems arising in this connection will be found in the *International Labour Review* for April 1934. In addition to the original series, a smoothed series is computed (by the method of moving averages) which removes seasonal and other short-period fluctuations. These indexes are useful as a standard of reference in comparing the movements of unemployment in different countries or groups of countries, and as a general measure of the relative changes in industrial unemployment in the world. While tentative and approximate in character, the series is less influenced than the individual indexes of which it is composed by chance circumstances, since these tend, on the average, to balance each other.

Up to the present the indexes have been weighted by weights derived from the censuses of about 1920; the indexes from 1933 onwards have now been recalculated on the basis of new weights derived from the censuses of 1930 or the nearest available date.

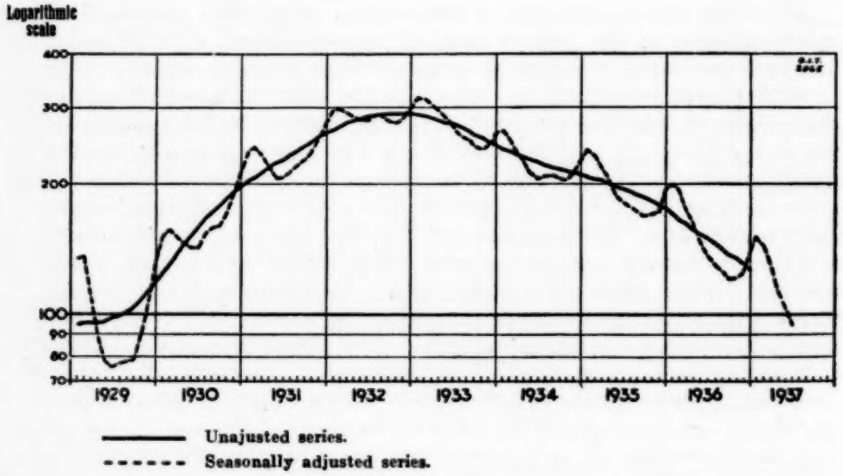
For explanation of the signs used in the table, see above, p. 537.

INTERNATIONAL INDEX NUMBERS OF UNEMPLOYMENT, 1929-1937

(Base : 1929 = 100)

Month	(a) Unadjusted series									(b) Seasonally adjusted series							
	1929	1930	1931	1932	1933	1934	1935	1936	1937	1929	1930	1931	1932	1933	1934	1935	1936
Jan.	134	151	239	297	319	263	239	200	153	94	124	202	266	289	238	209	171
Feb.	136	157	242	299	316	252	230	195	146	95	130	207	272	286	234	206	167
March	109	151	233	291	304	233	214	176	131r	95	137	212	277	283	231	203	163
April	90	145	219	284	291	221	201	164	112r	95	144	218	280	280	228	200	159
May	78	142	206	280	280	211	189	147	103†	96	151	223	283	277	225	197[2]	155
June	74	142	207	280	265	206	181	137	95†	98	158	228	285	274	223	194	151
July	76	153	213	286	256	210	178	130	—	99	165	233	287	270	220	191	147
Aug.	77	159	221	284	251	210	173	125	—	101	172	238	289	265	218	188	143
Sept.	78	160	227	279	241	204	171	121	—	103	179	243	290	259	216	185	139
Oct.	90	168	236	274	239	204	172	122	—	107	185	248	291	254	215	182	135
Nov.	105	189	251	283	245	213	174[1]	127	—	112	191	254	291	248	213	179	131†
Dec.	133	214	277	299	262	226	192	141	—	118	196	262	291	242	211	175	127†
Index	100	164	235	291	277	225	196	151	—	*	*	*	*	*	*	*	*

† Series exlcuding Italy.



——— Unajusted series.
- - - - - - Seasonally adjusted series.

Actual Hours of Work

The following table gives the available statistics on the *general level of actual hours of work.*[1] Figures for the different industries covered by these series will be found in the *Year-Book of Labour Statistics*, 1937.

These statistics are mainly of two kinds. Those of the first kind show the average number of hours worked per worker in a specified period (day, week, fortnight, or month); they are usually obtained by dividing the total number of hours worked during a certain period by the total number of days worked in the case of data expressed in hours per day, or by the total number of workers on the payroll during the week, fortnight, or month in the case of data expressed in terms of these time units. For various reasons, in particular owing to the Saturday half-holiday, the varying number of days in the different months, etc., and the labour turnover during the period, it is not possible to transform the series directly from one time unit to another.

The data of the second kind show the percentage of workers working a number of hours within a certain range. In certain cases the data are based on a classification of the hours worked by each individual worker. In others they are based on aggregate estimates of the time during which the establishments or their branches, shops, or shifts have been at work. The period covered by these statistics varies also from country to country (day, week, fortnight, etc.), and for the reasons given above a transformation to a common period is not possible. Similarly, the ranges of the durations vary considerably, but the International Labour Office has regrouped the figures so as to give, as far as possible, three or four uniform groupings.

The statistics are in most cases compiled from reports of a certain number of establishments. The number covered, the branches of industry represented, and their relative importance vary from country to country; the statistics relate primarily to manufacturing industries, but also include, to a varying extent, industries of other kinds (mines, transport, commerce, etc.). Owing to these differences in method, the series are better suited to the study of changes within the different countries during recent years than to international comparisons of average actual hours of work.

For explanation of the signs used in the table, see above, p. 537.

---

[1] Statistics of *normal* hours of work are published here from time to time; cf. in particular *International Labour Review*, Vol. XXXV, No. 3, March 1937, pp. 417-422.

STATISTICS OF THE GENERAL LEVEL OF ACTUAL HOURS OF WORK

Date	Germany	Austria			Estonia			
	Industries	Mines, industries			Industries, etc.			
	Statistics of establishments	Statistics of establishments			Statistics of establishments			
	Hours of work per day	% of workers working weekly[2]:			Hours of work per day [3]	% of male workers working daily [4]:		
		Under 48 h.	48 h.	Over 48 h.		Up to 7 h.	7.1-8.0 h.	Over 8 h.
1927	*	*	*	*	8.42	*	*	*
1928	7.66 [1]	*	*	*	8.42	*	*	*
1929	7.67	3.1	89.9	7.0	8.18	1.9	51.8	46.3
1930	7.37	3.6	88.8	7.6	8.16	1.7	50.1	48.2
1931	7.08	19.2	75.7	5.1	8.05	2.5	59.2	38.3
1932	6.91	16.7	78.8	4.5	7.86	2.1	81.3	16.6
1933	7.16	20.8	75.1	4.1	7.88	*	*	*
1934	7.43	20.8	72.3	6.9	7.93	1.9	72.4	25.7
1935	7.41	13.5	79.3	7.2	7.97	1.8	69.5	28.7
1936	7.59	15.1	77.8	7.1	7.99	1.9	62.8	35.3
1936 Aug.	7.52	15.9	77.6	6.5	*	*	*	*
Sept.	7.62	14.6	78.7	6.7	*	*	*	*
Oct.	7.68	14.4	78.9	6.7	*	*	*	*
Nov.	7.81	12.4	77.7	9.9	*	*	*	*
Dec.	7.76	14.3	76.7	9.0	8.01	*	*	*
1937 Jan.	7.50	15.0	78.7	6.3	*	*	*	*
Feb.	7.56	12.7	80.5	6.8	*	*	*	*
March	7.71	12.3	80.6	7.1	*	*	*	*
April	7.82	11.6	81.6	6.8	*	*	*	*
May	7.78	12.7	80.5	6.8	*	*	*	*
June	7.61	11.1	81.7	7.2	—	*	*	*
July	7.43	—	—	—	*	—	—	—
Aug.	7.51†	—	—	—	*	*	*	*
Workers covered	*	—			40,813	24,758		

[1] Average for the months July to December. [2] 1929-1931 : figures for January ; 1932 and 1933 : averages of the figures for January and July ; 1934 to 1936 : averages for the 12 months of the year ; the monthly figures relate to the first week of the month. [3] Annual figures : averages of two half-yearly figures ; monthly figures : averages for the half-year ending with the month in question. [4] The figures relate to the month of July of each year.

Date	United States		Finland				France			
	Industries		Industries				Mines, industries, transp., commerce			
	Statistics of establishments		Statistics of establishments				Returns of labour inspectors [3]			
	B.L.S. [1]	N.I.C.B. [2]	Hours of work per fortnight	% of workers working fortnightly :			% of workers working weekly :			I.N. of weekly hours
	Hours of work per week			Under 80 h.	80.0 to 95.9 h.	96 h. and more	Under 40 h.	40.0 to 47.9 h.	48 h. and more	Same month of 1930 = 100
1927	*	47.7	93.2	0	67.4	32.6	*	*	*	*
1928	*	47.9	93.2	1.5	65.5	33.0	*	*	*	*
1929	*	48.3	93.0	7.5	58.9	33.6	*	*	*	*
1930	*	43.9	90.8	3.3	62.0	34.7	0.5	4.5	95.0	100.0
1931	*	40.4	88.5	25.2	45.4	29.4	8.3	25.1	66.6	95.8
1932	37.9	34.8	90.9	8.8	66.7	24.5	20.6	27.0	52.4	91.1
1933	37.9	36.4	92.8	3.7	64.8	31.5	12.6	25.6	61.8	93.7
1934	34.7	34.7	94.0	0.8	68.1	31.1	13.6	29.6	56.8	93.0
1935	36.6[r]	37.2	93.4	—	—	—	14.1	30.3	55.6	92.7
1936	39.1	39.8	93.2	—	—	—	6.7	26.0	67.3	95.1
1936 Aug.	39.4	40.3	*	*	*	*	5.9	20.9	73.2	96.4
Sept.	38.7	40.6	*	*	*	*	5.1	19.1	75.8	96.4
Oct.	40.5	41.2	93.3	*	*	*	4.0	22.6	73.4	96.0
Nov.	40.6	41.3	*	*	*	*	4.6	26.1	69.3	95.4
Dec.	41.1	41.8	*	*	*	*	1.5[4]	18.5[4]	80.0[4]	90.1
1937 Jan.	39.6	41.0	94.2	*	*	*	1.4[4]	18.2[4]	80.4[4]	88.0
Feb.	40.4	41.4	*	*	*	*	1.5[4]	20.8[4]	77.7[4]	86.9
March	41.0	41.6	*	*	*	*	1.7[4]	29.2[4]	69.1[4]	84.4
April	40.4	40.8	94.4	*	*	*	5.9[4]	34.4[4]	59.7[4]	82.8
May	39.8	40.5 [r]	*	*	*	*	4.6[4]	28.9[4]	66.5[4]	81.7
June	39.2	40.2	*	*	*	*	7.1[4]	33.0[4]	58.9[4]	81.2
July	37.9	39.2	—	*	*	*	0	18.4[4]	81.6[4]	82.7
Aug.	38.6†	38.9†	*	*	*	*	0	30.0[4]	70.0[4]	82.6
Workers covered	4,926,628	*	*	*			15,742			*

[1] Bureau of Labour Statistics. [2] National Industrial Conference Board ; the monthly figures relate to the first week of the month. [3] The monthly figures relate to the first of the following month. [4] New series: establishments where the 40-hour week is not enforceable. [5] Approximate averages computed from the preceding data.

STATISTICS OF THE GENERAL LEVEL OF ACTUAL HOURS OF WORK (*concluded*)

Date	Hungary	Italy					Japan	
	Industries, etc.	Industries				Ind., etc.	Industries	
	Statistics of establishments	Statistics of establishments					Statistics of establishments	
	Hours of work per day	M. C. [1]				C. F. I. [2]	Imperial Cabinet	Bank of Japan
		% of workers working weekly:				Hours of work per month	Hours of work per day	
		Under 40 h.	40.0 to 44.9 h.	45 to 48 h.	Over 48 h.			
		a		*b*				
1927	8.86	*		*	*	*	9.40	*
1928	8.98	9.0[3]		78.3[3]	12.7[3]	180[3]	9.40	*
1929	8.97	8.9		75.5	15.6	182	9.27	*
1930	8.82	20.8		66.7	12.5	175	9.13	*
1931	8.64	24.2		64.6	11.2	171	9.08	*
1932	8.53	28.4		63.6	8.0	169	9.10	9.63
1933	8.59	20.8		70.7	8.5	174	9.22	9.75
1934	8.78	30.5		61.9	7.6	172	9.25	9.83
1935	8.83	28.3[4]	39.6[4]		21.7[4]	10.4[4]	158	9.28	9.85
1936	—	27.5	44.0		18.7	9.8	157	9.28	9.85
1936 Aug.	*	28.8	43.0		19.0	9.2	145	9.28	9.82
Sept.	*	25.2	47.7		18.8	8.3	161	9.32	9.87
Oct.	*	25.2	51.9		16.7	6.2	161	9.30	9.88
Nov.	*	22.4	52.0		18.5	7.1	155	9.28	9.90
Dec.	*	20.3	50.3		21.3	8.1	157	9.28	9.98
1937 Jan.	*	20.6	50.7		20.6	8.1	151	9.25	9.78
Feb.	*	16.9	51.4		23.0	8.7	156	9.27	9.90
March	*	17.4	49.6		24.3	8.7	163	9.31	9.93
April	*	16.2	47.6		26.5	9.7	164	9.31	9.91
May	*	15.2	44.7		29.1	11.0	163	9.31	9.90
June	*	16.2	42.7		29.5	11.6	166	—	9.90
July	*	14.8	44.9		29.3	11.0	—	—	—
Aug.	*	—	—		—	—	—	—	—
Workers covered	223,777	1,069,144					1,388,674	*	1,381,991

[1] Ministry of Corporations. Before May 1935, *a* = under 48 hours, *b* = 48 hours. The monthly figures relate to the last week of the month. [2] Fascist Confederation of Employers. [3] Average for the months February to December. [4] Average for the months May to December.

Date	Latvia			Norway	Poland	Sweden				
	Industries, etc.			Industries	Industries	Mines, industries, transport, commerce				
	Statistics of establishments			Statist. of establishm.	Statist. of establishm.	Statistics of establishments				
	% of workers working weekly:			Hours of work per week	Hours of work per week	Hours of work per week	% of workers working weekly:			
	Under 46 h.	46 h.	Over 46 h.				Up to 40 h.	41 to 47 h.	48 h.	Over 48 h.
1927	*	*	*	*	45.9	*	*	*	*	*
1928	*	*	*	*	45.4	*	*	*	*	*
1929	*	*	*	*	44.7	*	*	*	*	*
1930	*	*	*	*	43.7	*	*	*	*	*
1931	*	*	*	*	43.0	*	*	*	*	*
1932	24.9[1]	73.0[1]	2.1[1]	*	40.7	43.5	26.3	18.3	53.0	2.4
1933	13.6	84.6	1.8	*	40.9	46.1	8.4	31.9	52.3	7.4
1934	11.3	80.3	8.4	*	41.8	46.7	8.6	31.0	41.3	19.1
1935	17.6	62.0	20.4	*	42.2	47.0	7.0	35.4	37.7	19.9
1936	16.1	63.8	20.1	45.5	42.7	47.4	5.2	35.8	39.8	19.2
1936 Aug.	13.7	66.1	20.2	*	43.0	*	*	*	*	*
Sept.	13.2	64.8	22.0	45.7	43.2	*	*	*	*	*
Oct.	15.0	63.6	21.4	*	42.7	*	*	*	*	*
Nov.	17.7	62.0	20.3	*	42.5	47.4	5.2	35.8	39.8	19.2
Dec.	16.6	63.1	20.3	46.2	42.5	*	*	*	*	*
1937 Jan.	21.3	62.6	16.1	*	42.7	*	*	*	*	*
Feb.	20.1	60.5	19.4	*	43.3	*	*	*	*	*
March	15.4	66.3	16.3	46.0	43.8	*	*	*	*	*
April	15.6	59.3	25.1	*	42.3	*	*	*	*	*
May	12.3	61.3	26.4	*	43.0	*	*	*	*	*
June	11.0	62.6	26.4	—	43.5	*	*	*	*	*
July	14.2	61.3	24.5	*	43.5	*	*	*	*	*
Aug.	—	—	—	*	—	*	*	*	*	*
Workers covered	40,214			101,600	584,224	371,854				

[1] Average for the months February to December. [2] Figures for November.

Wages

The first part of the table gives national series of money wages, chosen with the intention of giving for each country a comprehensive view of the *general movement of industrial wages*, this term being taken to include wages in manufacturing and mining, and in some cases in transport and commerce, but not as a general rule in agriculture. [1] In some cases, as the general series do not include certain non-manufacturing branches, supplementary series have, when possible, been added. Figures for the different industries or occupations covered by these series will be found in the *Year-Book of Labour Statistics*, 1937.

The series show numerous divergences in the nature and scope of the data, in the distinctions according to sex, age, and degree of skill of the workers, and in the methods of calculating the averages. International comparisons can therefore be made only with numerous reservations, in particular when the data are not of the same nature (e.g. rates and earnings). In any case these figures cannot be considered as representative of the average wages of all the workers in industrial employment in each country, for most of the statistics are based on only a selection of workers, as a rule belonging to the better-paid groups.

The second part of the table gives index numbers of money wages, calculated in most cases by the International Labour Office from the data in the first part of the table, the year 1929 being as far as possible taken as base. In some cases, series showing absolute amounts are not available, and the published index numbers have been converted to the common base.

The third part gives index numbers of real wages, calculated by the Office by using the cost-of-living index numbers for each country converted to the year 1929 as base. [2]

Where the available series do not go back so far as the year 1929, the nearest year to that date has been taken as base, and the index numbers of money and real wages are shown in the table in italics. Further, in some cases the cost-of-living index numbers available relate to a single town (usually the capital), while the index numbers of money wages cover the whole country, or definitely limited regions, as in the case of mines ; in such cases the index numbers of real wages are given in brackets.

---

[1] For some countries the general series given in the present tables cover agriculture, without the possibility of excluding it. For wages in agriculture, cf. " Wages in Agriculture in Various Countries, 1927-1934 ", in *International Labour Review*, Vol. XXX, Nos. 5 and 6, Nov. and Dec. 1935, pp. 692-708 and 844-865.

[2] See below in this *Review* : " Cost of Living ".

International comparisons of the index numbers are subject to reservations similar to those made in the case of the series showing absolute amounts (from which the index numbers are derived); certain divergences between the basic data are, however, of less importance when the comparisons to be made are only between movements of wages and not between absolute amounts. In this respect the reader may usefully refer to the resolutions passed by the conferences of statistical experts on the methods of compiling statistics of wages, on the principal purposes for which the study of wage movements in time may be required, and on the special characteristics required by indexes to be used for each of these purposes. [1]

The nature of the series is summarily indicated in the headings. *Rates* are based on the conditions laid down in collective agreements or decisions of arbitration courts or other authorities, or fixed unilaterally by the employers, or merely on the wages recognised by custom. As a rule, these standards apply only to time workers and normal hours of work; the degree in which they are representative of wages paid to all workers in the branch in question varies from one country to another. In some countries, the rates are described as "minimum" rates, but this expression cannot always be taken in its strict sense. *Earnings* are usually based upon the payrolls of a number of representative undertakings; they express the average wages per worker actually paid (including bonuses, allowances, etc.) to all time and piece workers in the undertakings covered, for hours actually worked. The general term *wages* is used to cover all data not clearly belonging to one or other of the two types mentioned above. The chief case of this kind is that of the data compiled from social insurance statistics showing the number of insured persons in specified wage classes. These statistics, which cover all workers, usually give lower averages than the statistics of rates or earnings, which in most cases apply only to the better-paid groups of workers; the movements of the indexes are, however, more comparable than the absolute figures.

The scope of the series is indicated in the headings of the table by a reference to the main branches covered, in accordance with the list used by the International Labour Office for the presentation of data by industry or occupation. [2]

For explanation of the signs used in the table, see above, p. 537.

---

[1] Cf. *International Labour Review*, Vol. XIX, No. 4, April 1929, pp. 522-539: "An International Conference on Wage Statistics"; or INTERNATIONAL LABOUR OFFICE: *The International Standardisation of Labour Statistics*, pp. 45-53; Studies and Reports, Series N, No. 19; Geneva, 1934.

[2] Cf. *International Labour Review*, Vol. XXXIV, No. 1, July 1936, p. 114. As the list has been slightly rearranged, there are some changes in the headings as compared with previous issues of the table.

STATISTICS OF THE GENERAL LEVEL OF WAGES

Date	Germany					
	Mines *, industries, transport *					
	Men (skilled)	Men (semi-skill.)	Men (unskilled)	Women (skilled and semi-skilled)	Women (unskilled)	General average
	Hourly rates					
Money wages						
	Rpf.	Rpf.	Rpf.	Rpf.	Rpf.	
1927	*	*	*	*	*	*
1928	95.9	77.5	75.2	60.3	49.8	*
1929	101.1	81.8	79.4	63.4	52.7	*
1930	102.8	83.3	80.7	64.6	53.6	*
1931	97.4	79.3	76.6	61.5	51.0	*
1932	81.6	68.8	64.4	53.1	43.9	*
1933	78.6	68.2	62.3	51.7	43.4	*
1934	78.3	68.2	62.2	51.6	43.3	*
1935	78.3	68.3	62.2	51.6	43.4	*
1936	78.3	68.3	62.3	51.6	43.4	*
1936 : June	78.3	68.3	62.2	51.6	43.4	*
Sept.	78.3	68.3	62.3	51.6	43.4	*
Dec.	78.3	68.3	63.3[r]	51.6	43.4	*
1937 : March	—	—	—	—	—	*
June	—	—	—	—	—	*
Index numbers of money wages (Base : 1929 = 100)						
1927	*	*	*	*	*	87
1928	95	95	95	95	95	95
1929	100	100	100	100	100	100
1930	102	102	102	102	102	102
1931	96	97	96	97	97	97
1932	81	84	81	84	83	82
1933	78	83	78	82	82	79
1934	77	83	78	81	82	79
1935	77	83	78	81	82	79
1936	77	83	79	81	82	79
1936 : June	77	83	78	81	82	79
Sept.	77	83	79	81	82	79
Dec.	77	83	80[r]	81	82	79
1937 : March	—	—	—	—	—	—
June	—	—	—	—	—	—
Index numbers of real wages (Base : 1929 = 100)						
1927	*	*	*	*	*	91
1928	96	96	96	97	96	96
1929	100	100	100	100	100	100
1930	106	106	106	106	106	106
1931	109	110	109	110	110	109
1932	103	107	104	107	106	104
1933	101	109	103	107	108	104
1934	99	106	100	104	105	101
1935	97	104	98	102	103	99
1936	96	103	97	101	102	98
1936 : June	96	103	97	101	102	98
Sept.	96	103	97	101	102	98
Dec.	96	103	99[r]	101	102	98
1937 : March	—	—	—	—	—	—
June	—	—	—	—	—	—

Germany. Annual figures: averages; monthly figures: 1st of the following month. Before 1928, old series linked up with the new one.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Australia				Austria	Belgium		
	Mines °, industries, transport °, etc.				Mines	Mines, industries, transport		
	Men (skilled and unskilled)		Women (skilled and unskilled)		Men and women (skilled and unskilled)	Men and women		General average
						Skilled	Unsk.	
	Hourly rates	Weekly rates	Hourly rates	Weekly rates	Earnings per shift	Hourly earnings		
Money wages								
	s. d.	s. d.	s. d.	s. d.	Sch.			
1927	2 2¼	100 11¾	1 2	52 4½	9.29	*	*	*
1928	2 3	101 8¾	1 2½	53 8½	9.08	*	*	*
1929	2 3	102 2¾	1 2½	53 11¾	9.46	*	*	*
1930	2 2½	100 10	1 2½	53 11	9.80	*	*	*
1931	2 0	91 10½	1 1	48 10¾	9.61	*	*	*
1932	1 10¾	86 1¾	1 0¼	45 4¾	9.52	*	*	*
1933	1 10	83 1½	0 11¾	43 9	9.18	*	*	*
1934	1 10	83 7¼	0 11¾	44 3	8.90	*	*	*
1935	1 10½	84 8¼	1 0	44 11	8.61	*	*	*
1936	1 11	86 1½	1 0¼	45 9½	—	*	*	*
1936 : June	1 10¾	85 9	1 0¼	45 5	*	*	*	*
Sept.	1 11	86 1	1 0½	46 1	*	*	*	*
Dec.	1 11¼	87 2	1 0½	46 5	*	*	*	*
1937 : March	1 11¼	87 5	1 0½	46 7	*	*	*	*
June	—	—	—	—	*	*	*	*
Index numbers of money wages (Base : 1929 = 100)								
1927	99	99	97	97	98	*	*	*
1928	100	100	100	99	96	*	*	*
1929	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1930	98	99	99	100	104	106	107	108
1931	89	90	90	91	102	99	100	101
1932	84	84	84	84	101	90	91	92
1933	81	81	81	81	97	88	88	90
1934	82	82	82	82	94	84	84	86
1935	83	83	83	83	91	81	82	82
1936	85	84	85	85	—	87	89	88
1936 : June	84	84	84	84	*	84	84	85
Sept.	85	84	86	85	*	89	92	91
Dec.	86	85	86	86	*	90	93	91
1937 : March	86	86	86	86	*	95	97	95
June	—	—	—	—	*	97†	100†	98†
Index numbers of real wages (Base : 1929 = 100)								
1927	101	102	100	100	(103)	*	*	*
1928	102	102	102	102	(99)	*	*	*
1929	**100**	**100**	**100**	**100**	(100)	**100**	**100**	**100**
1930	103	104	105	105	(104)	102	103	104
1931	105	106	106	107	(106)	106	108	109
1932	104	104	104	104	(103)	108	108	111
1933	104	104	104	103	(103)	106	106	109
1934	103	103	103	103	(99)	106	106	108
1935	102	102	102	103	(96)	101	102	103
1936	103	102	103	103	—	103	104	104
1936 : June	103	102	103	103	*	101	100	102
Sept.	102	101	103	103	*	109	112	111
Dec.	103	102	103	103	*	104	108	105
1937 : March	103	102	103	103	*	105	108	106
June	—	—	—	—	*	108†	112†	109†

Australia. Annual figures : averages ; monthly figures : last day of the month.
Austria. Annual figures : averages.
Belgium. Annual figures : averages ; monthly figures : up to 1936 : averages for January, April, July, and October ; from 1937 : averages for the month in question.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Bulgaria			Canada			Estonia		
	Certain industries			Mines, certain ind., transp.	Other industries	Industries	Industries, etc.		
	Men (sk. and unsk.)	Women (sk. and unsk.)	General average	Men (chiefly skilled)	Men and women (sk. and unsk.)	Men (unsk.)	Men (sk. and unsk.)	Women (sk. and unsk.)	General average
	Hourly earnings			Hourly rates			Hourly earnings		
Money wages									
	Leva	Leva	Leva				Sant.	Sant.	Sant.
1927	*	*	*	*	*	*	34.4	21.5	29.3
1928	9.41	5.50	7.29	*	*	*	36.2	22.5	31.1
1929	10.01	5.98	7.81	*	*	*	37.9	23.0	32.1
1930	9.76	6.16	7.33	*	*	*	38.7	23.0	32.5
1931	9.25	5.58	7.12	*	*	*	37.0	22.9	31.9
1932	7.75	4.90	6.20	*	*	*	34.5	22.1	29.9
1933	7.76	4.69	6.53	*	*	*	33.2	22.0	29.2
1934	7.29	4.59	6.09	*	*	*	33.0	21.9	29.0
1935	7.04	5.13	6.11	*	*	*	34.4	22.4	29.9
1936	7.09	5.22	6.03	*	*	*	36.3	23.4	31.6
1936: June	*	*	*	*	*	*	37.5[1]	24.8[1]	33.2[1]
Sept.	7.31	5.38	6.14	*	*	*	37.0	23.7	32.4
Dec.	*	*	*	*	*	*	38.1[2]	24.8[2]	33.4[2]
1937: March	7.63	5.17	6.28	*	*	*	37.4	25.4	33.1
June	*	*	*	*	*	*	40.4	25.3	35.5
Index numbers of money wages (Base: 1929 = 100)									
1927	*	*	*	96	99	100	91	94	91
1928	94	92	93	97	99	100	96	98	97
1929	100	100	100	100	100	100	100	100	100
1930	98	103	94	101	100	100	102	100	101
1931	92	93	91	100	98	98	98	100	99
1932	77	82	79	94	91	92	91	96	93
1933	78	78	84	90	87	90	88	96	91
1934	73	77	78	89	89	91	87	95	90
1935	70	86	78	91	91	93	91	97	93
1936	71	87	77	91	93	96	96	102	98
1936: June	*	*	*	*	*	*	99[1]	108[1]	103[1]
Sept.	73	90	79	*	*	*	98	103	101
Dec.	*	*	*	*	*	*	101[2]	108[2]	104[2]
1937: March	76	86	80	*	*	*	99	110	103
June	*	*	*	*	*	*	107	110	111
Index numbers of real wages (Base: 1929 = 100)									
1927	*	*	*	97	100	102	(101)	(104)	(101)
1928	96	94	95	98	100	101	(99)	(102)	(101)
1929	100	100	100	100	100	100	100	100	100
1930	107	113	103	102	101	101	(115)	(113)	(114)
1931	116	117	114	111	109	109	(114)	(116)	(116)
1932	105	112	108	115	112	113	(113)	(119)	(116)
1933	114	115	123	115	111	115	(116)	(126)	(120)
1934	114	121	122	112	113	115	(117)	(128)	(121)
1935	118	144	131	114	115	117	(120)	(129)	(123)
1936	125	154	136	113	116	118	(114)	(121)	(117)
1936: June	*	*	*	*	*	*	(117)	(127)	(122)
Sept.	129	159	139	*	*	*	(114)	(120)	(118)
Dec.	*	*	*	*	*	*	(117)	(125)	(121)
1937: March	133	151	140	*	*	*	(111)	(125)	(116)
June	*	*	*	*	*	*	(120)	(124)	(124)

[1] Including supplementary wages paid to workers who have not used their holidays with pay. [2] Including Christmas bonus.

Bulgaria. Annual figures: up to 1933, averages of the figures for June and December; from 1934 onwards: averages of the figures for January and July; monthly figures: January and July, averages.

Canada. Annual figures: averages.

Estonia. Annual figures: averages; monthly figures: up to 1934: averages for the half-year ending with the month in question; from 1935 onwards: monthly averages.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Denmark				United States			
	Industries, transport [a], etc.				B.L.S. series			
					Mines		Industries	
	Men (skilled)	Men (unskilled)	Women (sk. and unskilled)	General average	Men (skilled and unskilled)		Men and women (skilled and unsk.)	
	Hourly earnings				Hourly earnings	Weekly earnings	Hourly earnings	Weekly earnings
Money wages								
	Öre	Öre	Öre	Öre	Cents	$	Cents	$
1927	155	124	84	129	*	*	*	*
1928	153	123	83	128	*	*	*	*
1929	153	124	83	128	*	*	*	*
1930	156	126	84	131	*	21.61	*	23.98
1931	155	126	84	131	*	18.61	*	22.44
1932	153	127	85	131	51.8	13.78	46.5	18.18
1933	153	127	85	131	49.6	14.29	46.0	17.60
1934	154	129	86	132	67.8	18.10	54.8	19.13
1935	155	129	87	133	74.7	19.50	56.8	21.03
1936	157	131	88	135	79.5	22.72	57.5	22.75
1936 : June	153	130	88	133	80.2	20.47	57.5	22.92
Sept.	156	131	88	135	80.2	23.03	56.9	22.20
Dec.	160	134	88	137	79.5	25.74	59.4	24.87
1937 : March	156	132	89	135	78.6	26.22	61.3	25.54
June	—	—	—	—	88.6	23.19	65.3	26.00
Index numbers of money wages (Base : 1929 = 100) [1]								
1927	101	100	101	101	*	*	*	99 [2]
1928	100	99	100	100	*	*	*	100
1929	**100**	**100**	**100**	**100**	*	**100** [2]	*	**100**
1930	102	102	101	102	*	87	*	93
1931	101	102	101	102	*	69	*	84
1932	100	102	102	102	**100** [2]	53	**100** [2]	68
1933	100	103	102	102	*96*	56	*98*	66
1934	100	104	103	103	*128*	70	*116*	73
1935	101	104	105	104	*139*	76	*120*	80
1936	102	106	106	105	—	90	—	86
1936 : June	100	105	106	104	*	81	—	86
Sept.	102	106	106	105	—	91	—	84
Dec.	105	108	106	107	*	101	—	93
1937 : March	102	106	107	105	—	103	—	96
June	—	—	—	—	*	91	—	98
Index numbers of real wages (Base : 1929 = 100) [1]								
1927	99	98	99	99	*	*	*	97
1928	99	99	99	99	*	*	*	100
1929	**100**	**100**	**100**	**100**	*	**100**	*	**100**
1930	107	106	106	107	*	90	*	96
1931	113	114	113	114	*	79	*	96
1932	112	114	114	114	**100**	67	**100**	86
1933	109	112	111	110	*99*	73	*101*	86
1934	105	108	108	107	*127*	89	*115*	92
1935	102	105	105	105	*135*	94	*117*	98
1936	102	105	106	105	—	109	—	104
1936 : June	99	105	105	103	*	98	—	105
Sept.	102	105	105	105	—	110	—	101
Dec.	104	107	105	106	*	122	—	112
1937 : March	100	104	105	103	—	122	—	114
June	—	—	—	—	*	108	—	115

[1] Except for series in italics : base : nearest possible year to 1929. [2] The index numbers of money wages have been calculated on the basis of the monthly percentages of change of wages in identical undertakings from month to month ; the money wages given above have therefore not been used directly for the purpose of this calculation. (See note on method in the *Review* for August 1935, pp. 259-260, or the *Year-Book of Labour Statistics*, 1935-36.)

Denmark : Annual figures : averages ; monthly figures : averages for the quarter ending with the month in question.

United States : Mines and industries : annual figures : averages (except money wages for 1930 ; averages for the last quarter) ; monthly figures : a week nearest to the 15th of the month (index numbers of hourly earnings in mines : figures for January and July).

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	United States (*cont.*)									
	N.I.C.B. series									
	Industries								Transport	
	Men (skilled and semi-skilled)		Men (unskilled)		Women (skilled) and unskilled)		General average		Men (skilled and unskilled)	
	Hourly earnings	Weekly earnings	Hourly earnings	Weekly earnings	Hourly earnings	Weekly earnings	Hourly earnings	Weekly earnings	Hourly earnings	Weekly earnings
Money wages										
	Cents	$	Cents	$	Cents	$	Cents	$	Cents	$
1927	65.6	31.52	47.2	23.55	39.8	17.37	57.6	27.53	62.2	30.46
1928	65.9	31.95	47.4	23.90	39.6	17.15	57.9	27.88	63.2	30.77
1929	66.8	32.59	48.6	24.42	39.9	17.63	58.9	28.52	64.6	31.71
1930	66.2	29.15	47.8	21.91	39.5	15.98	58.9	25.84	65.7	30.76
1931	63.4	25.07	46.1	19.21	37.1	14.70	56.5	22.64	66.7	29.41
1932	55.9	19.50	40.1	14.53	32.4	11.73	49.6	17.07	61.5	25.47
1933	55.0	20.26	40.1	14.91	34.0	12.36	49.1	17.71	61.5	25.56
1934	64.2	22.41	47.8	16.42	42.5	14.44	58.1	20.12	62.3	26.71
1935	66.2	24.91	49.4	18.26	43.4	15.31	59.9	22.27	67.4	29.46
1936	68.3	27.52	49.8	19.97	43.0	15.59	61.6	24.47	—	—
1936 : June	68.5	27.31	49.6	19.74	42.9	15.00	61.7	24.45	—	—
Sept.	68.7	28.16	49.6	20.25	43.0	15.87	61.9	25.11	—	—
Dec.	71.1	30.27	51.7	21.88	43.6	16.92	63.6	26.64	—	—
1937 : March	73.4	30.83	53.5	22.42	44.4	17.24	65.9	27.50	—	—
June	79.3	32.23	58.2	23.63	47.5	17.63	70.7	28.39	—	—
Index numbers of money wages (Base : 1929 = 100)										
1927	98	97	97	96	100	99	98	97	96	96
1928	99	98	98	98	99	97	98	98	98	97
1929	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1930	99	89	98	90	99	91	100	91	102	97
1931	95	77	95	79	93	83	96	79	103	93
1932	84	60	83	60	81	67	84	60	95	80
1933	82	62	83	61	85	70	83	62	95	81
1934	96	69	98	67	107	82	99	71	96	84
1935	99	76	102	75	109	87	102	78	104	93
1936	102	84	102	82	108	88	105	86	—	—
1936 : June	103	84	102	81	108	85	105	86	—	—
Sept.	103	86	102	83	108	90	105	88	—	—
Dec.	106	93	106	90	109	96	108	93	—	—
1937 : March	110	95	110	92	111	98	112	96	—	—
June	119	99	120	97	119	100	120	100	—	—
Index numbers of real wages (Base : 1929 = 100)										
1927	96	95	95	95	99	97	96	95	95	94
1928	98	98	97	97	99	97	98	97	97	97
1929	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1930	103	93	102	93	102	94	104	94	105	100
1931	109	88	109	90	107	96	110	91	119	106
1932	108	77	106	76	104	86	108	77	122	103
1933	110	83	110	82	114	94	111	83	127	108
1934	121	87	124	85	134	103	124	89	122	106
1935	120	93	123	91	132	105	123	95	126	113
1936	121	100	121	97	127	104	123	101	—	—
1936 : June	121	99	120	95	126	100	123	101	—	—
Sept.	120	101	119	97	126	105	122	103	—	—
Dec.	124	108	124	104	127	112	126	109	—	—
1937 : March	125	108	125	105	127	111	127	110	—	—
June	134	111	135	109	134	113	135	112	—	—

United States (cont.). Industries : annual figures : averages ; monthly figures : first week of the month. Transport : annual figures : averages ; monthly figures : averages.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	U.S.A. (*cont.*)	France							
	Certain industries, transport, etc. (trade union rates)	Mines	Industries (metals, etc.)	Industries, etc.					
			Paris region	Paris		Towns other than Paris			
	Men (chiefly skilled)	Men (chiefly sk. & unsk.)	Men and women (skilled and unskilled)	Men (chiefly skilled)				Women (chiefly skilled)	
	Hourly rates	Daily earnings	Hourly rates	Hourly rates	Daily rates	Hourly rates	Daily rates	Hourly rates	Daily rates
Money wages									
	Cents	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.
1927	115.4	31.30	4.44	5.12	41.70	3.31	27.34	1.81	14.84
1928	115.9	30.91	4.77	5.25	42.75	3.45	28.44	1.97	16.06
1929	120.4	34.29	5.45	6.10	49.56	3.83	31.34	2.26	18.30
1930	125.0	37.01	5.79	6.64	53.99	4.08	33.66	2.42	19.79
1931	125.4	35.68	5.74	6.61	53.83	4.08	33.60	2.42	19.73
1932	111.1	32.86	5.47	6.34	50.72	3.99	32.54	2.35	19.03
1933	106.2	32.53	5.57	6.34	50.72	3.89	31.70	2.26	18.18
1934	*	32.61	5.54	6.34	50.72	3.89	31.60	2.28	18.38
1935	*	32.47	5.49	6.23	49.75	3.80	30.72	2.26	18.13
1936	*	36.07	6.33	7.06	56.50	4.42	35.54	2.62	21.01
1936 : June	*	33.59	5.91	*	*	*	*	*	*
Sept.	*	36.71	6.74	*	*	*	*	*	*
Dec.	*	41.63	7.14	*	*	*	*	*	*
1937 : March	*	46.95	8.82	*	*	*	*	*	*
June	*	48.96	9.38	*	*	*	*	*	*
Index numbers of money wages (Base : 1929 = 100)									
1927	96	91	81	84	84	86	87	80	81
1928	95	90	88	86	86	90	91	87	88
1929	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1930	104	108	106	109	109	107	107	107	108
1931	104	104	105	108	109	107	107	107	108
1932	92	96	100	104	102	104	104	104	104
1933	88	95	102	104	102	102	101	100	99
1934	*	95	102	104	102	102	101	101	100
1935	*	95	101	102	100	99	98	100	99
1936	*	105	116	116	114	115	113	116	115
1936 : June	*	98	108	*	*	*	*	*	*
Sept.	*	107	124	*	*	*	*	*	*
Dec.	*	121	131	*	*	*	*	*	*
1937 : March	*	137	162	*	*	*	*	*	*
June	*	143	172	*	*	*	*	*	*
Index numbers of real wages (Base : 1929 = 100) [1]									
1927	95	*	88	91	91	*	*	*	*
1928	95	*	94	92	92	*	*	*	*
1929	**100**	*	**100**	**100**	**100**	*	*	*	*
1930	108	(**100**)	101	104	104	(**100**)	(**100**)	(**100**)	(**100**)
1931	120	(*99*)	103	106	107	(*103*)	(*103*)	(*103*)	(*103*)
1932	118	(*98*)	106	110	108	(*108*)	(*107*)	(*107*)	(*106*)
1933	114	(*101*)	109	111	109	(*109*)	(*108*)	(*107*)	(*105*)
1934	*	(*106*)	110	112	110	(*114*)	(*113*)	(*113*)	(*111*)
1935	*	(*112*)	116	117	116	(*119*)	(*117*)	(*119*)	(*117*)
1936	*	(*114*)	127	127	125	(*126*)	(*123*)	(*126*)	(*124*)
1936 : June	*	(*113*)	121	*	*	*	*	*	*
Sept.	*	*	137	*	*	*	*	*	*
Dec.	*	(*123*)	135	*	*	*	*	*	*
1937 : March	*	(*131*)	155	*	*	*	*	*	*
June	*	(*133*)	158	*	*	*	*	*	*

[1] Except for series in italics : base : nearest possible year to 1929.

United States (cont.). Certain industries, etc. : annual figures : 15 May of each year.

France. Mines : annual figures : averages ; monthly figures : averages for the quarter ending with the month in question. Industries (metals, etc.) : annual figures : averages ; monthly figures : averages for the quarter ending with the month in question. Industries, etc. : annual figures : October of each year.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Great Britain		Hungary				Italy
	M. of L. series	L. &C.E.S. series	Mines	Industries		Transport	Industries, etc.
	Agric., mines, ind., transp., local auth.		Men and women (skilled and unskilled)				Men and women (sk. and unsk.)
	Men and women (skilled and unsk.)						
	Weekly rates		Earnings per shift	Hourly earnings	Daily earnings	Insured daily wages	Hourly earnings
			Money wages				
			Pengö	Pengö	Pengö	Pengö	Lire
1927	*	*	4.72	0.55	5.12	3.29	*
1928	*	*	4.95	0.56	5.33	3.51	1.98
1929	*	*	5.07	0.57	5.58	4.07	2.02
1930	*	*	4.68	0.57	5.35	4.21	2.00
1931	*	*	4.60	0.54	5.05	4.10	1.81
1932	*	*	4.57	0.50	4.67	4.02	1.74
1933	*	*	4.29	0.48	4.34	3.63	1.70
1934	*	*	4.10	0.46	4.05	3.96	1.66
1935	*	*	4.00	0.44	3.90†	4.28	1.67
1936	*	*	—	—	—	4.12	1.74
1936 : June	*	*	—	*	*	4.10	1.70
Sept.	*	*	—	*	*	3.97	1.81
Dec.	*	*	—	*	*	4.26	1.80
1937 : March	*	*	—	*	*	4.14	1.77
June	*	*	—	*	*	4.03	2.17
			Index numbers of money wages (Base : 1929 = 100)				
1927	102	101	93	96	92	81	*
1928	100	101	98	98	96	86	98
1929	100	100	100	100	100	100	100
1930	100	99	92	100	96	103	99
1931	98	98	91	95	91	101	90
1932	96	96	90	88	84	99	86
1933	95	95	85	84	78	89	84
1934	96	95	81	81	73	97	82
1935	97	96	79	77	70†	105	83
1936	100	98	—	—	—	101	86
1936 : June	99	98	79	*	*	101	84
Sept.	100	99	—	*	*	98	90
Dec.	100	99	—	*	*	105	89
1937 : March	102	100	—	*	*	102	88
June	103	101	—	*	*	99	107
			Index numbers of real wages (Base : 1929 = 100)				
1927	100	99	(99)	(102)	(97)	(86)	*
1928	99	100	(98)	(99)	(96)	(87)	100
1929	100	100	(100)	(100)	(100)	(100)	100
1930	104	103	(102)	(110)	(106)	(114)	102
1931	109	109	(106)	(111)	(106)	(118)	103
1932	110	110	(108)	(105)	(100)	(118)	104
1933	112	111	(109)	(109)	(101)	(115)	106
1934	111	110	(107)	(106)	(96)	(128)	109
1935	111	110	(102)	(99)	(90) †	(135)	108
1936	111	109	—	—	—	(123)	104
1936 : June	113	111	—	*	*	(124)	102
Sept.	111	110	—	*	*	(118)	105
Dec.	109	108	—	*	*	(126)	104
1937 : March	110	109	—	*	*	(117)	101
June	111	108	—	*	*	(114)	117

Great Britain (including Northern Ireland). Annual figures : averages; monthly figures : Ministry of Labour series : averages for the quarter ending with the month in question; London and Cambridge Economic Service series : averages for the month in question.

Hungary. Annual and monthly figures : averages.

Italy. Annual and monthly figures : averages.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Japan							
	Imperial Cabinet series					Bank of Japan series		
	Mines	Industries			Transport	Industries		
	Men and women (sk. and unsk.)	Men (sk. and unsk.)	Women (sk. and unsk.)	General average	Men and women (sk. and unsk.)	Men (sk. and unsk.)	Women (sk. and unsk.)	General average
	Daily earnings							
Money wages								
	Sen	Sen	Sen	Sen	Sen	Sen	Sen	
1927	178.0	253.8	99.0	195.7	171.6	*	*	*
1928	179.9	259.6	100.3	204.2	186.2	*	*	*
1929	181.0	264.5	98.9	206.4	185.4	*	*	*
1930	170.6	255.1	91.3	200.2	189.8	*	*	*
1931	152.7	243.0	82.1	187.0	191.7	*	*	*
1932	145.5	250.6	76.5	190.9	192.0	*	*	*
1933	154.7	254.4	73.5	187.9	194.3	213.8	70.8	*
1934	165.3	248.6	72.5	189.3	192.8	217.1	70.0	*
1935	165.3	243.3	72.6	188.1	189.9	215.4	69.9	*
1936	174.5	241.5	73.8	190.1	190.1	213.1	70.2	*
1936 : June	172.8	239.0	73.7	188.8	192.4	211.6	69.7	*
Sept.	176.4	237.6	72.6	186.9	187.6	209.3	69.8	*
Dec.	179.0	252.1	75.7	198.7	191.3	222.2	72.2	*
1937 : March	189.6	250.8	78.7	200.2	190.8	221.0	74.3	*
June	—	—	—	—	—	222.7	75.5	*
Index numbers of money wages (Base : 1929 = 100)								
1927	98	96	100	95	93	99	103	98
1928	99	98	101	99	100	101	104	101
1929	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1930	94	96	92	97	102	95	91	95
1931	84	92	83	91	103	90	80	87
1932	80	95	77	92	104	90	74	85
1933	85	96	74	91	105	93	71	86
1934	91	94	73	92	104	94	70	88
1935	91	92	73	91	102	93	69	88
1936	96	91	75	92	103	92	69	88
1936 : June	95	90	75	91	104	91	68	87
Sept.	97	90	73	91	101	90	69	87
Dec.	99	95	77	96	103	96	71	93
1937 : March	105	95	80	97	103	95	74	93
June	—	—	—	—	—	96	74	93
Index numbers of real wages (Base : 1929 = 100) [1]								
1927	*	*	*	*	*	*	*	*
1928	*	*	*	*	*	*	*	*
1929	*	*	*	*	*	*	*	*
1930	*	*	*	*	*	*	*	*
1931	*	*	*	*	*	*	*	*
1932	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1933	*104*	*99*	*94*	*96*	*99*	*100*	*94*	*98*
1934	*107*	*93*	*89*	*93*	*95*	*98*	*89*	*97*
1935	*103*	*88*	*86*	*89*	*90*	*93*	*85*	*94*
1936	*106*	*86*	*86*	*88*	*88*	*90*	*83*	*92*
1936 : June	*105*	*84*	*85*	*88*	*89*	*89*	*82*	*91*
Sept.	*107*	*83*	*84*	*86*	*86*	*88*	*82*	*91*
Dec.	*109*	*89*	*87*	*92*	*88*	*94*	*85*	*97*
1937 : March	*113*	*87*	*89*	*91*	*86*	*91*	*87*	*95*
June	—	—	—	—	—	*90*	*86*	*93*

[1] Except for series in italics : base : nearest possible year to 1929.

Japan. Annual and monthly figures : averages.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Latvia (Riga)				Norway	New Zealand		Netherlands
	Industries, etc.				Mines, industries	Agric.*, mines *, industries, transport *, commerce		Mines, industries
	Men (skilled)	Men (unsk.)	Women (skilled)	Women (unsk.)	Men (sk. and unsk.)	Men (sk. and unsk.)	Women (sk. and unsk.)	Men (sk. and unsk.)
	Hourly earnings				Daily earnings	Weekly rates (minimum)		Hourly earnings
Money wages								
	Snt.	Snt.	Snt.	Snt.	Kr.			
1927	*	*	*	*	12.37	*	*	*
1928	83	54	43	32	11.69	*	*	*
1929	81	57	45	33	11.75	*	*	*
1930	84	59	44	33	11.80	*	*	*
1931	82	57	44	33	11.26	*	*	*
1932	72	50	39	31	11.48	*	*	*
1933	65	47	38	30	11.31	*	*	*
1934	63	47	38	30	11.34	*	*	*
1935	64	49	39	30	11.34	*	*	*
1936	65	49	40	31	11.71	*	*	*
1936: June	65	49	40	31	*	*	*	*
Sept.	66	48	40	31	*	*	*	*
Dec.	67	49	40	31	*	*	*	*
1937: March	65	49	40	31	*	*	*	*
June	67	51	40	32	*	*	*	*
Index numbers of money wages (Base: 1929 = 100)								
1927	*	*	*	*	105	97	99	96
1928	102	95	96	97	99	100	100	96
1929	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1930	104	104	98	100	100	100	100	102
1931	101	100	98	100	96	93	94	100
1932	89	88	87	94	98	85	90	93
1933	80	82	84	91	96	82	88	89
1934	78	82	84	91	97	82	88	87
1935	79	86	87	91	97	84	89	84
1936	80	85	89	93	100	93	95	81
1936: June	80	86	89	94	*	88	*	81
Sept.	81	84	89	94	*	99	*	*
Dec.	83	86	89	94	*	100	*	80
1937: March	80	86	89	94	*	101	*	*
June	83	89	89	97	*	101	*	—
Index numbers of real wages (Base: 1929 = 100) [1]								
1927	*	*	*	*	94	97	100	(96)
1928	*	*	*	*	95	100	100	(95)
1929	*	*	*	*	**100**	**100**	**100**	**(100)**
1930	**100**	**100**	**100**	**100**	104	102	102	(106)
1931	*107*	*106*	*110*	*111*	104	103	105	(111)
1932	*108*	*107*	*112*	*118*	109	102	107	(111)
1933	*102*	*105*	*114*	*120*	109	103	111	(107)
1934	*104*	*111*	*120*	*126*	108	102	109	(105)
1935	*104*	*114*	*121*	*125*	106	101	107	(104)
1936	*106*	*113*	*124*	*127*	107	109	111	(103)
1936: June	*103*	*111*	*121*	*125*	*	103	*	(104)
Sept.	*109*	*113*	*126*	*130*	*	114	*[1]	*
Dec.	*111*	*115*	*126*	*130*	*	113	*	(101)
1937: March	*108*	*115*	*126*	*130*	*	112	*	*
June	*95*	*103*	*108*	*115*	*	111	*	—

[1] Except for series in italics: base: nearest possible year to 1929.

Latvia. Annual and monthly figures: averages.

Norway. Annual figures: third quarter of each year, except for 1931 (fourth quarter).

New Zealand. Annual figures: averages; monthly figures: averages for the quarter ending with the month in question.

Netherlands. Annual figures: averages; monthly figures: averages for the half-year ending with the month in question.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Poland					Rumania
	Mines, industries	Industries				Ind. (some agric. occ., transport, commerce)
	Men and women (sk. and unsk.)	Men (Skilled and unskilled)	Women (Skilled and unskilled)	General average (including young persons)		Men and women (skilled and unskilled)
	Hourly earnings	Hourly earnings			Weekly earnings	Monthly earnings
Money wages						
	Zl.	Zl.	Zl.	Zl.	Zl.	
1927	*	*	*	*	*	*
1928	0.94	*	*	*	*	*
1929	1.02	*	*	*	*	*
1930	1.01	*	*	*	*	*
1931	0.95	*	*	*	*	*
1932	0.87	0.81	0.56	0.72	29.60	*
1933	0.80	0.74	0.52	0.66	28.01	*
1934	0.75	0.71	0.50	0.64	26.74	*
1935	0.73	0.70	0.50	0.63	26.96	*
1936	0.72	0.71	0.50	0.64	27.36	*
1936 : June	0.72	*	*	*	*	*
Sept.	0.72	*	*	*	*	*
Dec.	0.74	*	*	*	*	*
1937 : March	0.72	*	*	*	*	*
June	0.73	*	*	*	*	*
Index numbers of money wages (Base : 1929 = 100) [1]						
1927	*	*	*	*	*	98
1928	92	*	*	*	*	99
1929	**100**	*	*	*	*	**100**
1930	99	*	*	*	*	96
1931	93	*	*	*	*	85
1932	85	**100**	**100**	**100**	**100**	69
1933	78	*91*	*93*	*92*	*95*	63
1934	74	*88*	*89*	*89*	*90*	62
1935	72	*86*	*89*	*88*	*91*	61
1936	71	*88*	*89*	*89*	*92*	62
1936 : June	71	*	*	*	*	63
Sept.	71	*	*	*	*	63
Dec.	73	*	*	*	*	64
1937 : March	71	*	*	*	*	—
June	72	*	*	*	*	—
Index numbers of real wages (Base : 1929 = 100) [1]						
1927	*	*	*	*	*	109
1928	(94)	*	*	*	*	102
1929	(**100**)	*	*	*	*	**100**
1930	(106)	*	*	*	*	97
1931	(110)	*	*	*	*	**100**
1932	(111)	(**100**)	(**100**)	(**100**)	(**100**)	*97*
1933	(112)	(*100*)	(*102*)	(*101*)	(*104*)	*96*
1934	(112)	(*103*)	(*105*)	(*105*)	(*106*)	*97*
1935	(114)	(*106*)	(*109*)	(*107*)	(*112*)	*84*
1936	(118)	(*113*)	(*115*)	(*114*)	(*119*)	—
1936 : June	(118)	*	*	*	*	*74*
Sept.	(118)	*	*	*	*	—
Dec.	(118)	*	*	*	*	—
1937 : March	(110)	*	*	*	*	—
June	(111)	*	*	*	*	—

[1] Except for series in italics : base : nearest possible year to 1929.

Poland. Mines, industries : annual and monthly figures : averages (from 1928 to 1931, indexes calculated on the basis of the movement of rates). Industries : annual figures : one pay period (generally a week) in the month of August in each year.

Rumania. Annual figures : averages ; monthly figures : averages for January, April, July, and October. For real wages the indexes since 1931 are calculated on a new cost-of-living index.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Sweden					
	Mines *, industries, transport, commerce					
	Men (skilled and unskilled)		Women (skilled and unskilled)		General average (including young persons)	
	Hourly earnings	Daily earnings	Hourly earnings	Daily earnings	Hourly earnings	Daily earnings
Money wages						
	Kr.	Kr.	Kr.	Kr.	Kr.	Kr.
1927	1.20	9.57	0.72	5.64	1.08	8.58
1928	1.22	9.67	0.73	5.71	1.10	8.67
1929	1.25	9.99	0.74	5.80	1.12	8.94
1930	1.29	10.40	0.75	5.95	1.16	9.29
1931	1.29	10.26	0.75	5.88	1.15	9.16
1932	1.27	10.12	0.74	5.86	1.14	9.04
1933	1.22	9.75	0.73	5.75	1.09	8.73
1934	1.22	9.79	0.73	5.75	1.09	8.76
1935	1.24	10.12	0.74	5.84	1.12	9.03
1936	1.26†	10.14†	0.75†	5.93†	1.13†	9.04†
1936 : June	*	*	*	*	*	*
Sept.	*	*	*	*	*	*
Dec.	*	*	*	*	*	*
1937 : March	*	*	*	*	*	*
June	*	*	*	*	*	*
Index numbers of money wages (Base : 1929 = 100)						
1927	96	96	97	97	96	96
1928	98	97	99	98	98	97
1929	100	100	100	100	100	100
1930	103	104	101	103	104	104
1931	103	103	101	101	103	102
1932	102	101	100	101	102	101
1933	98	98	99	99	97	98
1934	98	98	99	99	97	98
1935	99	101	100	101	100	101
1936	101†	102†	101†	102†	101†	101†
1936 : June	*	*	*	*	*	*
Sept.	*	*	*	*	*	*
Dec.	*	*	*	*	*	*
1937 : March	*	*	*	*	*	*
June	*	*	*	*	*	*
Index numbers of real wages (Base : 1929 = 100)						
1927	95	95	96	96	95	95
1928	96	96	98	97	97	96
1929	100	100	100	100	100	100
1930	107	107	104	106	107	107
1931	110	109	108	107	109	109
1932	110	110	108	110	110	110
1933	108	108	109	110	107	108
1934	107	108	108	109	107	108
1935	107	110	108	109	108	110
1936	109†	109†	109†	110†	109†	109†
1936 : June	*	*	*	*	*	*
Sept.	*	*	*	*	*	*
Dec.	*	*	*	*	*	*
1937 : March	*	*	*	*	*	*
June	*	*	*	*	*	*

Sweden. Annual figures : averages.

STATISTICS OF THE GENERAL LEVEL OF WAGES (*cont.*)

Date	Switzerland					
	Industries, some transport, commerce, etc.					
	Men (skilled and semi-skilled)		Men (unskilled)		Women (skilled and unskilled)	
	Hourly earnings	Daily earnings	Hourly earnings	Daily earnings	Hourly earnings	Daily earnings
Money wages						
	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.
1927	*	12.20	*	9.69	*	6.34
1928	*	12.20	*	9.69	*	6.34
1929	1.48	12.45	1.14	9.85	0.77	6.45
1930	1.49	12.57	1.16	9.90	0.76	6.36
1931	1.51	12.62	1.16	9.97	0.78	6.36
1932	1.45	12.92	1.11	10.35	0.74	6.54
1933	1.43	12.73	1.09	10.08	0.72	6.32
1934	1.39	12.75	1.07	10.00	0.71	6.46
1935	1.36	12.39	1.05	9.73	0.70	6.36
1936	1.33	12.12	1.03	9.51	0.69	6.11
1936 : June	*	*	*	*	*	*
Sept.	*	*	*	*	*	*
Dec.	*	*	*	*	*	*
1937 : March	*	*	*	*	*	*
June	*	*	*	*	*	*
Index numbers of money wages (Base : 1929 = 100) [1]						
1927	*	98	*	98	*	98
1928	*	98	*	98	*	98
1929	100	100	100	100	100	100
1930	101	101	102	101	99	99
1931	102	101	102	101	101	99
1932	98	100	97	100	96	100
1933	97	*99*	96	*97*	94	*97*
1934	94	*99*	94	*97*	92	*99*
1935	92	*96*	92	*94*	91	*97*
1936	90	*94*	90	*92*	90	*93*
1936 : June	*	*	*	*	*	*
Sept.	*	*	*	*	*	*
Dec.	*	*	*	*	*	*
1937 : March	*	*	*	*	*	*
June	*	*	*	*	*	*
Index numbers of real wages (Base : 1929 = 100) [1]						
1927	*	99	*	99	*	99
1928	*	98	*	98	*	98
1929	100	100	100	100	100	100
1930	103	103	104	102	101	101
1931	109	109	109	109	109	106
1932	114	100	114	100	112	100
1933	119	*104*	117	*103*	115	*102*
1934	117	*106*	117	*103*	115	*106*
1935	116	*103*	116	*101*	114	*105*
1936	111	*99*	111	*97*	110	*99*
1936 : June	*	*	*	*	*	*
Sept.	*	*	*	*	*	*
Dec.	*	*	*	*	*	*
1937 : March	*	*	*	*	*	*
June	*	*	*	*	*	*

[1] Except for series in italics : base : nearest possible year to 1929.

Switzerland. Annual figures : averages. From 1932 onwards the index numbers of daily earnings are no longer strictly comparable with those for previous years owing to a change in method.

STATISTICS OF THE GENERAL LEVEL OF WAGES *(concluded)*

Date	Czechoslovakia				Union of South Africa	U.S.S.R.	Yugoslavia	
	Mines	Industries (Prague)		Agr., ind., some transport, comm.etc.	Mines, ind., transport, commerce	Mines, industries	Croatia & Slavonia: Mines, ind., transport, commerce	Ind., some transport, comm., etc.
	Men and women (sk. and unskilled)	Men and women (skilled and unskilled)		Men and women (sk. and unskilled)	Men (skilled and unskilled)	Men and women (sk. and unskilled)	Men and women (sk. and unskilled)	Men and women (sk. and unskilled)
	Earnings per shift	Hourly rates (minim.)	Weekly rates (minim.)	Insured daily wages	Weekly rates	Monthly wages	Monthly earnings	Insured daily wages
Money wages								
	Kč.	Kč.	Kč.			Rbl.	Dinar	
1927	40.93	4.06	194.80	*	*	64.07	*	*
1928	42.70	4.26	204.38	*	*	70.24	*	*
1929	43.29	4.37	209.98	*	*	77.06	*	*
1930	43.89	4.47	214.75	*	*	82.59	1,143	*
1931	44.94	4.49	215.65	*	*	96.10	1,137	*
1932	44.72	4.49	215.50	*	*	115.42	1,042	*
1933	44.35	4.47	214.56	*	*	126.08	988	*
1934	43.10	4.37	209.54	*	*	147.30	899	*
1935	43.11	4.34	208.32	*	*	185.32	890	*
1936	—	4.33	207.76	*	*	—	909	*
1936: June	*	4.34	208.44	*	*	*	903	*
Sept.	*	4.34	208.44	*	*	*	906	*
Dec.	*	4.26	204.39	*	*	*	909	*
1937: March	*	4.21	202.25	*	*	*	—	*
June	*	4.19	200.91	*	*	*	—	*
Index numbers of money wages (Base: 1929 = 100) [1]								
1927	95	93	93	*	99	83	*	95
1928	99	97	97	97	99	91	*	98
1929	100	100	100	100	100	100	*	100
1930	101	102	102	100	100	107	100	101
1931	104	103	103	98	97	125	*99*	100
1932	103	103	103	93	93	150	*91*	93
1933	102	102	102	88	94	164	*86*	88
1934	100	100	100	85	94	191	*79*	84
1935	100	99	99	83	98	240	*78*	82
1936	—	99	99	85	99†	—	*80*	82
1936: June	*	99	99	84	*	*	*79*	82
Sept.	*	99	99	86	*	*	*79*	83
Dec.	*	97	97	85	*	*	*80*	83
1937: March	*	96	96	86	*	*	—	82
June	*	96	96	89	*	*	—	—
Index numbers of real wages (Base: 1929 = 100) [1]								
1927	(94)	93	92	*	98	*	*	(92)
1928	(98)	97	97	(97)	99	*	*	(99)
1929	(100)	100	100	100	100	*	*	(100)
1930	(104)	105	105	(102)	102	*	100	(110)
1931	(111)	110	110	(104)	103	*	*100*	(114)
1932	(113)	112	112	(101)	104	*	*99*	(115)
1933	(113)	113	113	(96)	108	*	*106*	(111)
1934	(111)	111	111	(95)	106	*	*106*	(112)
1935	(108)	108	107	(90)	111	*	*96*	(111)
1936	—	106	106	(91)	112†	*	—	(111)
1936: June	*	106	106	(90)	*	*	*101*	(113)
Sept.	*	107	107	(93)	*	*	*96*	(114)
Dec.	*	105	105	(92)	*	*	—	(111)
1937: March	*	103	103	(92)	*	*	—	(111)
June	*	101	101	(94)	*	*	—	—

[1] Except for series in italics: base: nearest possible year to 1929.

Czechoslovakia. Annual and monthly figures: averages. Before 1929, real wages calculated on a slightly different cost-of-living index.

Union of South Africa. Annual figures: 30 September of each year.

U.S.S.R. Annual and monthly figures: averages.

Yugoslavia. Croatia and Slavonia (monthly earnings): annual figures: December of each year; monthly figures: averages. Whole country (insured daily wages): annual and monthly figures: averages.

Cost of Living

The following table gives the principal *index numbers of the cost of living* (official and unofficial) published in the different countries. Index numbers of the principal groups of expenditure (food, heating and lighting, clothing, rent, etc.) which go to make up the general index numbers will be found in the *Year-Book of Labour Statistics*, 1937.

The upper part of the table gives the index numbers on their original base, often differing from country to country; the lower part of the table gives the same index numbers recalculated by the International Labour Office on the uniform base 1929 = 100. This change of base has been effected by simply dividing the index for each date by the corresponding index for 1929 (annual average) and multiplying the quotient by 100. This procedure may perhaps give rise to some slight inaccuracies, owing to the methods by which many of the indexes are compiled, but these errors are at most very slight, except when the fluctuations of the indexes reach a certain amplitude. For a few countries, where data for 1929 were not available, the year nearest to 1929 has been taken as base; in these cases the figures are printed in italics.

These index numbers, even when reduced to a common base, cannot be used to compare the *level* of the cost of living in the different countries, but only its *fluctuations*. But even the fluctuations of the different index numbers are far from having the same significance, owing to the numerous divergences in the methods of compilation of the series (for example, the geographical scope of the indexes; the groups represented in the general index and the articles included in each group; the weights attached to the various articles and groups; the statistical basis for the determination of these weights; the extent to which they are representative of the consumption of more or less extensive or clearly determined social classes and the date to which they relate; the method of calculating average prices, group indexes, and the general index, etc.). International comparisons cannot therefore be more than approximate.

For explanation of the signs used in the table, see above, p. 537.

COST-OF-LIVING INDEX NUMBERS

Country	Germany	Argentina	Australia	Austria	Belgium	Brazil	Bulgaria	Canada	Chile	China			Denmark	Danzig
Towns and localities	72	Buenos Aires	30	Vienna	59	Rio de Janeiro	12-67 [3]	60	Santiago	Peiping	Shanghai	Tientsin	100	Danzig
Original base (= 100)	1913-1914	X.1933	1923-1927	VII. 1914	1921	1928-1929	1914	1926	III. 1928	1927	1926	1926	1931	VII. 1913
Composition of the index	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-d*	*a-e*	*a-e*
Original series; base differing from country to country														
1913-1914 [1]	100	*	*	100	*	*	100	*	*	*	*	*	*	100
1927	148	121	100	106	203	102	2814	98	*	100	107	106	114	140
1928	152	119	100	108	208	100	2875	99	107 [4]	102	103	110	113	141
1929	154	121	103	111	220	100	2941	100	109	107	108	116	112	142
1930	148	123	97	111	228	91	2690	99	108	110	122	119	106	135
1931	136	105	87	106	204	87	2349	90	107	96	126	114	100	124
1932	121	94	83	108	184	88	2160	81	114	91	119	106	100	113
1933	118	100	80	105	182	87	2006	78	141	81	107	92	104	110
1934	121	94	82	105	175	94	1873	79	142	80	106	90	108	108
1935	123	100	83	105	176	99	1750	79	144	86	107	100	111	120
1936	125	109	85	105	186	113	1677	81	157	100	113	113	112	132
1936 : Sept.	124	111	*	105	187	116	1650	82	163	99	114	110	113	132
Oct.	124	110	*	105	191	117	1665	82	164	102	114	112	*	134
Nov.	124	109	86 [2]	105	193	117	1678	82	164	105	115	115	*	135
Dec.	124	110	*	105	194	116	1684	82	164	108	118	123	113	136
1937 : Jan.	125	108	*	105	196	—	1692	82	163	114	120	124	*	136
Feb.	125	109	86 [2]	105	198	—	1700	82	161	113	120	125	*	137
March	125	112	*	104	197	—	1697	82	165	112	117	125	115	137
April	125	113	*	104	195	—	1698	83	172	114	117	125	*	138
May	125	113	87 [2]	105	195	—	1700	83	176	109	119	122	*	139
June	125	115	*	106	198	—	1713	83	179	104	119	120	116	139
July	126	113	*	105	203	—	1721	84	—	—	120	—	*	139
Aug.	126	112	—	105	204	—	1718	—	—	—	135	—	*	138
Sept.	125	—	*	105	—	—	—	—	—	—	148	—	—	139
Series recalculated by the I.L.O. on the base 1929 = 100														
1927	96	100	97	96	93	102	96	99	*	94	99	91	102	98
1928	99	99	98	97	95	100	98	99	98 [4]	95	95	95	101	99
1929	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1930	96	101	95	100	104	91	92	99	99	103	113	103	95	95
1931	88	87	85	96	93	87	80	90	98	90	117	98	89	88
1932	78	78	81	97	84	88	73	82	104	86	110	91	89	80
1933	77	83	78	95	83	87	68	78	130	76	99	80	93	77
1934	79	78	80	95	79	94	64	79	130	75	98	78	96	76
1935	80	83	81	95	80	99	60	79	132	81	99	86	99	85
1936	81	91	83	94	85	113	57	81	144	94	105	98	100	93
1936 : Sept.	81	92	*	94	85	116	56	82	149	93	105	95	101	93
Oct.	81	91	*	95	87	117	57	82	151	96	106	97	*	95
Nov.	81	90	84 [2]	95	88	117	57	82	150	98	106	99	*	95
Dec.	81	91	*	95	88	117 [5]	57	82	150	101	109	106	101	95
1937 : Jan.	81	89	*	94	89	—	57	82	149	107	111	107	*	96
Feb.	81	90	84 [2]	94	90	—	58	82	147	106	111	108	*	96
March	81	92	*	94	90	—	58	82	152	105	108	108	103	97
April	81	94	*	94	89	—	58	83	157	107	109	108	*	97
May	81	93	85 [2]	94	89	—	58	83	162	102	110	105	*	98
June	81	95	*	95	90	—	58	83	164	98	110	104	104	98
July	82	94	*	94	92	—	58	84	—	—	111	—	*	98
Aug.	82	93	—	94	93	—	58	—	—	—	125	—	*	98
Sept.	81	—	*	94	—	—	—	—	—	—	137	—	—	98

Composition of the indexes: *a* = Food; *b* = Heating and lighting; *c* = Clothing; *d* = Rent; *e* = Miscellaneous.

[1] Period or date within the years 1913-1914, and differing from country to country. [2] Quarterly averages. [3] The monthly indexes relate to 12 towns. [4] Revised series. For 1928, average calculated for a period of less than one year.

COST-OF-LIVING INDEX NUMBERS (*cont.*)

Country	Egypt	Spain	Estonia	United States		Finland	France		Great Britain and N. Ireland	Greece	Hungary	India		
				B.L.S.	B.L.G.B.									
Towns and localities	Cairo	Madrid	Tallinn	32-51	51-174	21	Paris	45	509	44	Budapest	Bombay	Ahmedabad	Rangoon
Original base (= 100)	I. 1913-VII. 1914	1914	1913	1923-1925	1923	I-VI. 1914	1914	1930	VII. 1914	XII. 1914	1913	VII. 1914	VIII. 1918-VII. 1927	1931
Composition of the index	*a*, *c-e*	*a*, *b*, *e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-d*	*a-d*	*a-e*	*a-e*
Original series; base differing from country to country														
1913-1914 [1]	100	100	100	*	*	100	100	*	100	100	100	100	*	*
1927	153	189	105	101	102	1207	514	*	168	1790	111	154	99 [4]	*
1928	152	176	112	99	101	1233	519	*	166	1868	117	147	96	*
1929	151	181	117	99	100	1225	556	*	164	1923	117	149	97	*
1930	148	186	104	96	97	1129	582	100	158	1682	106	137	87	*
1931	138	194	100	87	87	1039	569	97	148	1671	101	110	75	100
1932	132	186	94	78	78	1025	526	91	144	1773	98	109	76	98
1933	125	180	88	76	75	1001	520	87	140	1904	91	103	72	91
1934	127	184	87	79	79	983	516	83	141	1937	89	97	71	87
1935	130	180	88	81	83	997 [2]	483	78	143	1957	91	101	71	90
1936	130	—	98	82	85	998	507	86	147	2028	96	102	71	88
1936 : Sept.	129	—	100	*	86	1004	*	*	148	2039	97	103	72	87
Oct.	128	—	100	82	86	1008	*	*	151	2057	97	104	72	85
Nov.	129	—	99	*	86	1013	540 [3]	91 [3]	151	2065	97	103	71	82
Dec.	129	—	101	82	86	1018	*	*	151	2079	98	104	72	84
1937 : Jan.	130	—	104	*	87	1020	*	*	151	2150	101	104	74	89
Feb.	130	—	104	*	87	*	581 [3]	97	151	2167	102	104	74	88
March	129	—	103	84	88	*	*	*	151	2168	102	104	73	88
April	129	—	103	*	88	1041	*	*	152	2184	102	104	75	89
May	128	—	102	*	89	*	606 [3]	99	152	2203	102	106	76	89
June	127	—	104	85	89	*	*	*	155	2192	102	—	76	89
July	128	—	104	*	89	1052	*	*	155	2172	102	—	77	92
Aug.	128	—	103	*	89	*	—	104	155	2194	102	—	—	—
Sept.	—	—	—	—	89	*	*	*	158	2187	104	—	—	—
Series recalculated by the I.L.O. on the base 1929 = 100 [5]														
1927	101	104	90	102	102	99	92	*	102	93	95	103	102 [4]	*
1928	101	97	96	100	100	101	93	*	101	97	100	99	99	*
1929	100	100	100	100	100	100	100	*	100	100	100	100	100	*
1930	98	103	89	96	97	92	105	100	96	88	91	92	90	*
1931	91	107	86	87	87	85	102	*97*	90	100	86	74	77	100
1932	87	103	80	79	78	84	95	*91*	88	*106*	83	73	78	*98*
1933	83	100	75	76	75	82	94	*87*	85	*114*	77	69	74	*91*
1934	84	102	74	79	79	80	93	*83*	86	*116*	76	65	73	*87*
1935	86	99	75	81	83	81	87	*78*	87	*117*	78	68	73	*90*
1936	86	—	84	82	85	81	91	*86*	89	*121*	82	69	73	*88*
1936 : Sept.	85	—	85	*	86	82	*	*	90	*122*	83	69	74	*87*
Oct.	85	—	85	83	86	82	*	*	92	*123*	83	70	74	*85*
Nov.	85	—	85	*	86	83	97 [3]	*91* [3]	92	*124*	82	69	73	*82*
Dec.	85	—	86	83	86	83	*	*	92	*124*	83	70	74	*84*
1937 : Jan.	86	—	89	*	87	83	*	*	92	*129*	86	70	76	*89*
Feb.	86	—	89	*	87	*	104 [3]	*97*	92	*130*	87	70	76	*88*
March	85	—	88	84	88	*	*	*	92	*130*	87	70	75	*88*
April	85	—	88	*	88	85	*	*	93	*131*	87	70	77	*89*
May	85	—	87	*	89	*	109 [3]	*99*	93	*132*	87	71	78	*89*
June	84	—	89	85	89	*	*	*	95	*132*	87	—	78	*89*
July	85	—	89	*	89	86	*	*	95	*130*	87	—	79	*92*
Aug.	85	—	88	*	89	*	—	*104*	95	*131*	87	—	—	—
Sept.	—	—	—	—	89	*	*	*	96	*131*	88	—	—	—

Composition of the indexes: *a* = Food; *b* = Heating and lighting; *c* = Clothing; *d* = Rent; *e* = Miscellaneous.

[1] Period or date within the years 1913-1914, and differing from country to country. [2] Quarterly averages. [3] Half-yearly averages. [4] Average calculated for a period of less than one year. [5] Except for the series in italics: original base, or recalculated on the nearest possible year to 1929.

COST-OF-LIVING INDEX NUMBERS (*cont.*)

Country	Netherlands Indies	Irish Free State	Italy	Japan		Latvia	Lithuania	Luxemburg	Norway	New Zealand	Palestine	Netherlands	Peru [1]
Towns and localities	Java and Madura	105	50	13	Tokyo	Riga	104	9	31	4-25	3	Amsterdam	Lima
Original base (= 100)	1913	VII. 1914	VI. 1928	VII. 1914	VII. 1914	1930	1913	1914	VII. 1914	1926-1930	I. 1922	X. 1923-IX. 1924	1913
Composition of the index	*a, b, e*	*a-e*	*a-e*	*a-e*	*a-e, e*	*a-e*	*a-e*	*a-e, e*	*a-e*	*a-e*	*a, b, e*	*a-e*	*a, c-e*
Original series; base differing from country to country													
1913-1914 [2]	100	100	*	100	100	*	100	100	100	*	*	*	100
1927	158	175	101 [3]	*	189	*	134	776	186	100	77	95	194
1928	148	174	99	*	184	*	130	811	173	101	72	96	181
1929	157	176	101	*	181	*	127	871	166	100	68	95	177
1930	152	171	98	*	155	100	113	886	161	98	60	91	169
1931	102	161	88	160 [3]	136	91	106	793	153	91	54	86	158
1932	76	157	84	164	137	79	90	689	149	84	55	80	151
1933	62	151	80	168	146	76	77	686	147	80	54	79	148
1934	61	153	76	174	149	72	72	661	148	81	54	79	150
1935	65	156	77	181	152	73	63	648	151	84	53	77	152
1936	60	160	84	185	159	73	64	651	155	86	56	75	160
1936 : Sept.	57	*	85	186	160	72	65	656	155	88	61	75	161
Oct.	58	*	86	184	159	82	67	656	155	88	58	76	162
Nov.	60	166	86	185	159	76	66	663	155	88	58	76	162
Dec.	62	*	86	186	163	72	66	659	157	89	58	76	162
1937 : Jan.	64	*	87	188	170	69	69	672	158	89	62	76	163
Feb.	65	167	87	190	171	71	71	677	159	90	61	76	167
March	65	*	88	190	171	72	71	675	161	90	60	76	167
April	64	*	90	192	172	74	71	678	163	91	61	77	170
May	66	167	91	192	172	78	71	675	163	92	59	77	171
June	67	*	93	192	171	84	71	693	166	92	57	78	171
July	68	*	93	194	172	83	72	700	168	92	58	79	171
Aug.	71	170	94	194	174	82	—	706	168	93	59	79	172
Sept.	—	*	—	—	178	—	—	705	170	—	58	—	171
Series recalculated by the I.L.O. on the base 1929 = 100 [4]													
1927	101	99	100 [3]	*	104	*	106	89	112	100	114	100	110
1928	95	99	98	*	102	*	102	93	104	100	107	101	103
1929	100	100	100	*	100	*	100	100	100	100	100	100	100
1930	97	97	97	*	86	100	89	102	97	98	89	96	96
1931	65	92	87	*98* [3]	75	*91*	83	91	92	90	80	90	90
1932	48	89	83	100	75	*79*	71	79	90	84	82	84	86
1933	39	86	80	*103*	80	*76*	61	79	89	79	79	83	84
1934	39	87	76	*106*	82	*72*	57	76	89	81	80	83	85
1935	41	89	77	*110*	84	*73*	50	74	91	83	79	81	86
1936	38	91	83	*113*	88	*73*	51	75	93	86	84	79	90
1936 : Sept.	36	*	84	*114*	88	*72*	51	75	93	87	90	79	91
Oct.	37	*	85	*112*	87	*82*	52	75	93	87	85	79	92
Nov.	38	94	85	*113*	88	*76*	52	76	93	88	86	80	92
Dec.	40	*	85	*113*	90	*72*	52	76	95	88	85	79	92
1937 : Jan.	41	*	86	*115*	94	*69*	55	77	95	88	92	80	92
Feb.	41	95	86	*116*	94	*71*	56	78	96	90	90	80	94
March	41	*	87	*116*	94	*72*	56	77	97	90	88	80	95
April	41	*	89	*117*	95	*74*	56	78	98	91	91	81	96
May	42	95	90	*117*	95	*78*	56	77	98	92	87	81	97
June	43	*	92	*117*	94	*84*	56	80	100	91	85	82	97
July	43	*	92	*118*	95	*83*	56	80	101	92	85	83	97
Aug.	45	97	93	*118*	96	*82*	—	81	101	92	87	83	97
Sept.	—	*	—	—	98	—	—	81	102	—	87	—	97

Composition of the indexes : *a* = Food ; *b* = Heating and lighting ; *c* = Clothing ; *d* = Rent ; *e* = Miscellaneous.

[1] Period or date within the years 1913-1914, and differing from country to country. [2] Average calculated for a period of less than one year. [3] Up to September 1933 inclusive, the index does not include heating. [4] Except for the series in italics : original base, or recalculated on the nearest possible year to 1929.

COST-OF-LIVING INDEX NUMBERS (*concluded*)

Country	Poland	Portugal	Southern Rhodesia	Rumania	Sweden	Switzerland	Czechoslovakia	Turkey	Union of South Africa	Yugoslavia	
Towns and localities	Warsaw	Whole country	6	20	49	34	Prague	Istanbul	9	Belgrade	3 (Croatia & Slavonia)
Original base (= 100)	1928	VI. 1914	1914	1913	VII. 1914	VI. 1914	VII. 1914	I-VI. 1914	1914	1926	VII. 1914
Composition of the index	*a-e*	*a, b, e*	*a, b, d*	*a-d*	*a-e*	*a-e*	*a-e*	*a-e*	*a-e*	*a-c, e*	*a-e*
Original series ; base differing from country to country											
1913-1914[1]	*	100	100	100	100	100	100	100	100	*	100
1927	100	*	115	3811	171	160	747	*	131	97	*
1928	100	*	118	4128	172	161	748	*	131	93	1756[2]
1929	102	2361	120	4244	170	161	763	1381	131	94	1817
1930	94	2243	117	4206	165	158	746	1272	128	86	1674
1931	86	1990	116	3004	159	150	713	1203	123	82	1539
1932	78	1949	110	2512	157	138	700	1172	118	76	1391
1933	71	1948	105	2319	154	131	692	1047	115	75	1202
1934	67	1968	104	2235	155	129	684	1031	116	71	1108
1935	64	1982	104	2567	156	128	704	957	116	70	1097
1936	61	2022	103	—	158	131	710	960	116	70	1106
1936 : Sept.	61	2074	103	—	157	130	706	947	115	69	1110
Oct.	62	2095	103	—	*	132	707	945	115	70	1139
Nov.	62	2045	102	—	*	132	704	952	116	70	1148
Dec.	62	2030	103	—	158	132	706	964	116	70	1155
1937 : Jan.	64	2535	102	—	*	134	711	987	116	70	1153
Feb.	65	2400	103	—	*	136	715	1002	116	70	1146
March	65	2422	104	—	161	136	715	—	117	70	1155
April	64	2448[2]	104	—	*	137	715	—	118	71	1177
May	65	2524	104	—	*	136	717	—	118	73	1195
June	65	2547	105	—	162	137	725	—	119[2]	73	1208
July	65	2544	104	—	*	137	723	—	118	—	1207
Aug.	64	—	—	—	*	137	720	—	119	—	1188
Sept.	66	—	—	—	165	137	724	—	—	—	—
Series recalculated by the I.L.O. on the base : 1929 = 100[3]											
1927	98	*	95	90	101	99	100	*	100	103	*
1928	99	*	98	97	101	100	101	*	100	99	97[2]
1929	100	100	100	100	100	100	100	100	100	100	100
1930	93	95	97	99	97	98	98	92	98	92	92
1931	85	84	96	100	94	93	93	87	94	87	85
1932	77	83	92	*84*	92	86	92	85	90	81	77
1933	70	83	88	*77*	91	81	91	76	88	79	66
1934	66	83	87	*74*	91	80	90	75	89	75	61
1935	63	84	86	*85*	92	80	92	69	88	74	60
1936	60	86	86	—	93	81	93	70	88	74	61
1936 : Sept.	60	88	86	—	92	81	93	69	88	73	61
Oct.	61	89	86	—	*	82	93	68	88	74	63
Nov.	61	87	85	—	*	82	92	69	89	75	63
Dec.	61	86	85	—	93	82	93	70	89	75	64
1937 : Jan.	63	107	85	—	*	83	93	71	89	74	63
Feb.	64	102	86	—	*	85	94	73	89	75	63
March	64	103	87	—	95	85	94	—	90	74	64
April	63	104[2]	86	—	*	85	94	—	90	76	65
May	64	107	87	—	*	84	94	—	90	77	66
June	64	108	87	—	95	85	95	—	91[2]	78	66
July	64	108	87	—	*	85	95	—	90	—	66
Aug.	63	108	—	—	*	85	94	—	91	—	65
Sept.	65	—	—	—	97	85	95	—	—	—	—

Composition of the indexes : *a* = Food ; *b* = Heating and lighting ; *c* = Clothing ; *d* = Rent ; *e* = Miscellaneous.

[1] Period or date within the years 1913-1914, and differing from country to country. [2] Average calculated for a period of less than one year. [3] Except for the series in italics : original base, or recalculated on the nearest possible year to 1929.

BIBLIOGRAPHY

Book Notes

INTERNATIONAL PUBLICATIONS

International Labour Office. *The I.L.O. Year-Book 1936-37.* Seventh Year of Issue. Geneva, 1937. VIII + 607 pp. 10s. 6d. ; $2.75.

This volume opens with a short general introduction giving a brief survey of the activities of the International Labour Organisation during the period under consideration, which is the year 1936, and in some cases the first quarter of 1937. This is followed by eight chapters dealing with the following subjects : economic developments ; conditions of work (hours, holidays, hygiene, safety, women's work, protection of children and young persons, and factory inspection) ; social insurance ; the remuneration of labour ; employment, unemployment, and migration ; workers' living conditions (vocational training, utilisation of spare time and housing) ; workers' general rights (right of association, profit sharing and participation in management, collective agreements, conciliation and arbitration, participation of workers in national economic life, etc.) ; and special problems of certain categories of workers (salaried employees, professional workers, home workers, agricultural workers, seamen, Native labour, and prison labour). Appendices are added giving lists of the States Members of the Organisation, of the permanent delegates accredited to the International Labour Office and the League of Nations, showing the distribution of the 50 ratifications registered from 16 March 1936 to 15 March 1937, representation at the Conference and composition of delegations, and the composition of the Governing Body and committees, and statistics of international and national federations of trade unions. The volume contains a full geographical and subject index.

—— *The Evaluation of Permanent Incapacity for Work in Social Insurance.* Studies and Reports, Series M (Social Insurance) No. 14. Geneva, 1937. XVI + 375 pp. 10s. 6d. $2.75.

During the last few years the Office has received many requests for information and advice concerning definitions of incapacity, methods of evaluation, incapacity schedules, and the constitutions of the bodies charged with the evaluation. It consequently decided to undertake, in collaboration with its Committee of Experts for Social Insurance, a study of the chief problems involved in the evaluation of permanent incapacity. The present work sets forth the results of this study. It consists essentially of a comparison and a critical analysis of the methods widely used for the evaluation of incapacity in workmen's compensation on the one hand, and of invalidity insurance on the other. It contains seven chapters dealing respectively with the following subjects : conceptions of incapacity ; methods of evaluating incapacity ; incapacity schedules ; minimum degree of incapacity giving right to benefit ; determination of the starting-point of permanent incapacity benefit ; review of evaluation of incapacity ; authorities or bodies responsible for evaluating incapacity. Two important appendices are attached : one contains texts of, or extracts from, the incapacity schedules used in various countries, and

the other reproduces the conclusions on the evaluation of incapacity which were formulated by the meeting of experts arranged by the International Labour Office in November 1936.

—— *Annuaire des statistiques du travail.* Deuxième année 1937. *Year-Book of Labour Statistics.* Second Year of Issue. Geneva, 1937. VIII + 237 pp. 6 frs. (Swiss); 6s.; $1.50.

The second (1937) issue, as an independent volume, of the Year-Book of Labour Statistics has just been published, and for the first time the work is presented in bilingual form, both the French and English versions appearing in the same volume. The scope and general arrangement of the tables are much the same as in the previous issue, but several additions have been made. These include a new section on population, while the section on employment and unemployment contains new tables giving the international employment index numbers compiled by the International Labour Office and separate statistics of unemployment by sex. Other tables have been added to the section on wages. Several new series have been inserted in the tables showing employment, actual hours of work and wages, by industry or occupation. Certain economic statistics communicated by the Economic Intelligence Service of the League of Nations have been included in an appendix. On the other hand, the tables on wages in agriculture, quantities of foodstuffs consumed, and collective agreements given in the previous issue have now been suppressed. The tables given are divided into eight sections, dealing with the following subjects: population; employment and unemployment; hours of work; wages; cost of living and retail prices; workers' family budgets; migration; and industrial relations. The appendix referred to above contains tables of the index numbers of industrial production, the index numbers of wholesale prices, and exchange rates. After a list of principal sources, the volume concludes with a synoptic table indicating the countries included in the different tables of the volume.

Fédération internationale des ouvriers de transport. *Conférence internationale du personnel des chemins de fer relative à la traction Diesel et électrique, tenue à Paris, 27-28 octobre 1936. Compte rendu.* Amsterdam. 1937. 63 pp. typescript.

International Federation of Lithographers, Lithographic Printers and Kindred Trades. *Fourteenth Congress, Lugano, 20-22 September 1936. Reports and Minutes.* Amstelveen. 162 pp.

OFFICIAL PUBLICATIONS

BULGARIA

Direction générale de la statistique. *Statistique des prix des marchandises dans le commerce de gros et de détail.* Sofia, 1937. VI + 117 pp.

GREAT BRITAIN

Board of Education. *A Review of Junior Technical Schools in England.* Educational Pamphlets No. 111. London, H.M. Stationery Office, 1937. 41 pp. 9d.

This report, which is based on a systematic survey undertaken by Government inspectors, reviews in some detail the distribution, organisation, and work of the junior technical schools in England. It concludes that there is "abundant evidence of the efficiency of the schools as a whole, and of their successful performance of the special educational and industrial functions for which they were designed".

—— *Safety Principles for Boys Employed in Coal Mining. Being the Report of H.M. Inspectors on Instruction in Safety Principles in Junior Courses in the West Riding of Yorkshire.* London, H.M. Stationery Office, 1937. 19 pp. 6d.

Colonial Office. *Report by His Majesty's Government in the United Kingdom of Great Britain and Northern Ireland to the Council of the League of Nations on the Administration of the Cameroons under British Mandate for the Year 1936.* London, H.M. Stationery Office, 1937. 158 pp., tables, map. 3s.

—— *Report by His Majesty's Government in the United Kingdom of Great Britain and Northern Ireland to the Council of the League of Nations on the Administration of Palestine and Trans-Jordan for the Year 1936.* London, H.M. Stationery Office, 1937. XIV + 413 pp., map. 6s. 6d.

—— *Report by His Majesty's Government in the United Kingdom of Great Britain and Northern Ireland to the Council of the League of Nations on the Administration of Togoland under British Mandate for the Year 1936.* London, H.M. Stationery Office, 1937. IV + 121 pp., tables, map. 3s.

Department of Overseas Trade. (a) *Report on Economic and Commercial Conditions in Chile.* By John MITCHESON. *May 1937.* V + 54 pp. 1s. (b) *Report on Economic and Commercial Conditions in Czechoslovakia.* By A. D. SPINKS. VIII + 47 pp. 1s. (c) *Report on Economic and Commercial Conditions in Egypt.* By G. H. SELOUS, O.B.E. *May 1937.* XII + 199 pp. 3s. 6d. (d) *Report on Economic and Commercial Conditions in Greece.* By S. R. JORDAN. *April 1937.* VIII + 87 pp. 1s. 6d. (e) *Report on Economic and Commercial Conditions in Malaya.* By A. HARTLAND. *To 5 March* 1937. VI + 50 pp. 1s. (f) *Report on Economic and Commercial Conditions in Morocco.* By L. H. HURST, G. E. MONCK-MASON and E. A. KEELING. VIII + 72 pp., map. 1s. 6d. (g) *Report on Economic and Commercial Conditions in Poland.* By C. B. JERRAM. XI + 47 pp. 1s. (h) *Report on Economic and Commercial Conditions in Siam.* By J. BAILEY. *April 1937.* VIII + 48 pp. 1s. (i) *Report on Economic and Commercial Conditions in Sweden.* By H. A. N. BLUETT, O.B.E., *April 1937.* VIII + 82 pp. 1s. 6d. London, H.M. Stationery Office, 1937.

Home Office. *Report of the Departmental Committee on Night Baking.* London, H.M. Stationery Office, 1937. 48 pp. 9d.

The Committee on Night-Baking, under the chairmanship of Lord ALNESS, was appointed to enquire into the effects likely to ensue (1) to those engaged in the bread baking and flour confectionery industry, and (2) to the public, in the event of the abolition by legislation of the practice of night baking now prevalent in the industry; and to consider and report whether or not such legislation would be desirable.

The report, after reviewing the position with regard to night baking in Great Britain during and just after the war, the conclusions of committees on the subject appointed in 1919, 1923, and 1925, and the legislative situation in other countries, examines in detail the present position in Great Britain with special reference to the number of bakehouses of various sizes and of the persons employed therein by day and by night, the nature of the process, the hours of starting work, and the actual hours of work. The effects of night work on the operatives with respect to health and to their enjoyment of social life and amenities are briefly discussed. The probable effects of the prohibition of night work on the employers and on the operatives are analysed and the special difficulties of application and enforcement are reviewed.

The Committee concludes that legislation to abolish night baking is not in the present circumstances desirable. In a minority report, Mr. F. MARSHALL, M.P., disagrees with this conclusion.

Ministry of Labour. *Report for the Year 1936.* London, H.M. Stationery Office, 1937. VII + 141 pp. 2s. 6d.

—— *Report of the Unemployment Assistance Board for the Year ended 31 December 1936.* London, H.M. Stationery Office, 1937. IV + 202 pp. 3s. 0d.

—— **and Ministry of Transport. Committee on the Regulation of Wages and Conditions of Service in the Road Motor Transport Industry (Goods).** *Report.* London, H.M. Stationery Office, 1937. 56 pp. 1s.

Safety in Mines Research Board. *Protective Equipment for Mineworkers.* London, 1937. 20 pp., illustr.

SCOTLAND

Scottish Housing Advisory Committee. *Report on Rural Housing in Scotland.* Edinburgh, H.M. Stationery Office, 1937. 106 pp., tables. 1s. 6d.

In January 1936 the Scottish Housing Advisory Committee was asked by the Department of Health to furnish a report on the following terms of reference: "To consider the application of the Housing (Scotland) Acts and the Housing (Rural Workers) Acts to housing conditions in rural areas and to advise what action should be taken to facilitate in such areas the provision of new houses and the improvement of existing houses for the working classes, with special reference to the position of farm servants, small landholders and persons of like economic condition." The report in question was issued in June 1937. It deals separately with the general administration of the Housing Acts, housing in villages, the housing of farm servants, and the housing of landholders, cottars, and small tenants. The Committee finds that, generally speaking, the local authorities are not adequately carrying out their duties under the Housing Acts with regard to inspection, building, or reconstruction; that there is a serious shortage in villages of houses for the general needs of the rural population; that a very large number of farm servants' dwellings are defective; and that many small landholders and tenants are living in radically unfit houses. The Committee is also of opinion that the "tied-house" system has certain real disadvantages from the workers' point of view and that housing policy should seek to reduce it to a minimum; and that the housing of unmarried farm workers in bothies and "chaumers" is most unsatisfactory.

The Committee recommends that the Government should make a special grant for the construction of new houses for all kinds of rural workers. It considers that a supply of good houses, as recommended in the report, is one of the best ways of stopping the drift from country to town, and that it would assist greatly in ensuring a contented and settled rural population.

INDIA

Department of Commercial Intelligence and Statistics. *Statistical Abstract for British India with Statistics, where available, relating to certain Indian States from 1924-25 to 1933-34.* Delhi, 1936. XI + 969 pp. Rs. 4-12.

NETHERLANDS

Central Bureau voor de Statistiek. *Bedrijfstelling 31 December 1930.* Deel III. *Inleiding; met cartogrammen als afzonderlijk Bijvoegsel.* The Hague, 1936-1937. 295 pp. 2.50 fl.

—— **Nederlandsch Economisch Instituut. Netherlands Central Statistical Office and the Netherlands Economic Institute.** *Tabellen en Grafieken betreffende de Nederlandsche Conjunctuur. Tables and Graphs relating to Economic Conditions in the Netherlands.* Rotterdam. 45 pp. 2 fl.

Departement van sociale Zaken. *Drie en twintigste Internationale Arbeidsconferentie gehouden te Genève, 3-23 Juni 1937. Beknopt Verslag van de Secretaris der Nederlandsche Afvaardiging.* The Hague, 1937. 84 pp. 0.50 fl.

NEW ZEALAND

Labour Department. Employment Division. *Measures for the Protection of Employment. Review as at 1 April 1937.* 53 + XI pp., typescript.

SWEDEN

Delegationen för det internationella socialpolitiska samarbetet. *Nationernas Förbund. Den ekonomiska och sociala utvecklingen under år 1936.* Årsrapport avgiven av direktören för internationella arbetsbyrån Harold BUTLER. Stockholm, Norstedt, 1937. 71 pp.

Swedish edition of the Report of the Director to the Twenty-third Session of the International Labour Conference, published by the Swedish "Delegation for International Co-operation in Social Policy".

SWITZERLAND

Département fédéral de l'économie publique. *Rapports des inspecteurs fédéraux des fabriques sur l'exercice de leurs fonctions pendant l'année 1936, avec un extrait des rapports des gouvernements cantonaux et du gouvernement de la principauté de Liechtenstein concernant l'exécution de la loi fédérale sur le travail dans les fabriques au cours des années 1935 et 1936.* Berne, 1937. 168 pp.

—— **Commission fédérale d'étude des prix.** *La situation de l'industrie des pâtes alimentaires en Suisse.* 25me supplément de *La vie économique.* Berne, 1937. IV + 55 pp.

—— **Service fédéral du contrôle des prix.** *La situation économique et sociale de la cordonnerie suisse. Résultats des enquêtes effectuées en 1935 et 1936 par le Service fédéral du contrôle des prix du Département fédéral de l'économie publique, sur mandat de la Commission fédérale d'experts de la cordonnerie.* Berne, 1937. III + 83 pp., typescript.

Rapport du Conseil fédéral à l'Assemblée fédérale sur sa gestion en 1936. (Du 9 avril 1937). Annexes : *Rapport du Tribunal fédéral suisse à l'Assemblée fédérale sur la gestion pendant l'année 1936. Rapport du Tribunal fédéral des assurances à l'Assemblée fédérale sur sa gestion pendant l'année 1936.* Berne, 1937. 356 pp.

UNION OF SOUTH AFRICA

Department of Mines. *Report of the Miners' Phthisis Board for the Period 1 April 1935 to 31 March 1936.* Pretoria, 1937. 44 pp. 2s. 6d.

Report presented by the Government of the Union of South Africa to the Council of the League of Nations concerning the Administration of South West Africa for the Year 1936. Pretoria, 1937. IV + 105 pp., illustr. 7s. 6d.

UNITED STATES

Department of Commerce. Bureau of the Census. *Census of Business : 1935. Retail Distribution.* Vol. V. *Employment and Pay Roll. Monthly Employment by Kinds of Business and Employment and Pay Roll for One Week by Occupational Classes.* Washington, 1937. 211 pp.

—— —— *Census of Business : 1935. Wholesale Distribution.* Vol. V. *Employment and Pay Roll. Monthly Employment, by Kinds of Business and Employment and Pay Roll for One Week by Occupational Classes.* Washington, 1937. 117 pp.

Department of the Interior. Office of Education. *Co-operative Training in Retail Selling in the Public Secondary Schools.* By Glenn O. EMICK. Bulletin No. 186. Washington, Govt. Printing Office, 1937. XII + 195 pp., illustr. 20 cents.

Deals with instruction in the retail selling of goods by the co-operative method of training. This involves co-operation between a school and a place of business and the training of two sets of pupils at once, one at the school and the other at the place of business. At pre-determined periods (for example, every week) there is an interchange of pupils. The system has been in operation in certain schools in the United States for nearly 25 years and is claimed to be the most efficient method of training for retail selling. The bulletin describes the methods followed during 1932-33 in all schools giving instruction by this method. It is primarily intended to aid high school authorities to organise courses of instruction.

—— —— *Functional Planning of Elementary School Buildings.* By Alice BARROWS. Bulletin No. 19, 1936. Washington, Govt. Printing Office, 1937. VIII + 83 pp. 25 cents.

—— —— *Trends in Secondary Education, being Chapter II of Volume I of the Biennial Survey of Education in the United States : 1934-36.* By Carl A. JESSEN. Bulletin No. 2 (Advance Pages) 1937. Washington, 1937. 44 pp. 10 cents.

A discussion of the status and trends of secondary education, including vocational education, with suggestions for its further development.

—— —— **Committee on Youth Problems.** *Youth Community Surveys.* By Carl A. JESSEN and H. Clifton HUTCHINS. Washington, Govt. Printing Office, 1936. 97 pp. 15 cents.

Department of Labor. Children's Bureau. *Industrial Home Work under the National Recovery Administration.* By Mary SKINNER. Publication No. 234. Washington, Govt. Printing Office, 1936. v + 57 pp. 10 cents.

This bulletin opens with a brief description of attempts to regulate or abolish home work by State laws or collective agreements; it then describes conditions of home work in 28 industries in 7 States in 1934, when the industrial codes applied under the National Industrial Recovery Act inaugurated in many industries a nation-wide control and provided in 90 industries for abolition of home work either immediately or within specified periods.

The author indicates the types of work most frequently performed by home workers, their earnings, working hours, and ages, compares these with the earnings, hours, and ages of factory workers in the same industries, and discusses the desirability and possibility of transferring home workers to factory employment. It is shown that only 5 per cent. of the home workers received hourly earnings equal to the usual code minimum, and that long hours and night work were generally necessary to secure earnings far below factory standards. The author states that many home workers express a preference for factory work and most would accept it if they could find employment, that the amount of home work greatly diminished under the codes, that the adjustment of former home workers to factory employment proved less difficult than had been anticipated, and that numbers of employers found advantages in the discontinuance of home work and preferred to have all work done in the factory if they could be protected against the competition of other employers who sent work out.

—— **Employment Service. Division of Standards and Research.** *Who are the Job Seekers? Characteristics of 7,800,000 Employment Office registrants in December 1935 and 6,600,000 registrants in July 1936.* Washington, Govt. Printing Office, 1937. v + 156 pp., tables, diagrams.

—— —— —— **Forms and Procedures Section.** *A Field Visiting Program for the Public Employment Service.* Washington, Govt. Printing Office, 1937. v + 65 pp. 10 cents.

A manual for guidance of the staff of the United States Employment Service with reference to visits to employers.

Federal Emergency Administration of Public Works. Housing Division. Homes for Workers. Housing Division Bulletin No. 3. Washington, Govt. Printing Office, 1937. 87 pp., illustr. 15 cents.

National Resources Committee. *Farm Tenancy. Report of the President's Committee.* Washington, Govt. Printing Office, 1937. VIII + 108 pp., illustr. 30 cents.

Social Security Board. *Analysis of State Unemployment Compensation Laws, 1 January 1937.* Prepared under the direction of Merrill G. MURRAY. Washington, Govt. Printing Office, 1937. 23 pp. 15 cents.

A tabulated statement of the most significant provisions of the various State unemployment compensation laws.

—— *Unemployment Compensation. What and Why?* Washington, Govt. Printing Office, 1937. IV + 57 pp.

This study contains a brief review of the development of unemployment insurance in the United States and a short history of unemployment insurance in Great Britain and Germany. It also analyses the pertinent sections of the Social Security Act and the general provisions of the various State laws.

Works Progress Administration. Division of Social Research. *Digest of Public Welfare Provisions under the Laws of the State of Louisiana.* Washington, Govt. Printing Office, 1937. Pp. 1601-1699g (typescript).

—— —— *Intercity Differences in Costs of Living in March 1935, 59 Cities.* By Margaret Loomis STECKER. Preliminary Report. Washington, 1937. 193 pp.

ILLINOIS

National Youth Administration. *Manual for Teachers in Occupational Information Classes.* Prepared by Marion O. HAWTHORNE and Hester M. HOOD. Under direction of C. Myers BARDINE. Revised edition, 1937. 29 pp., typescript.

KANSAS

Legislative Council. Special Judicial Committee. *Report on the Power of the Legislature to enact Legislation in conformity with the Federal Social Security Act and the Kansas Constitution.* 27 pp., typescript.

NON-OFFICIAL PUBLICATIONS

Albrecht, Georg. *Die Familienhilfe in der Krankenversicherung. Eine zusammenfassende Darstellung.* Berlin, Vordruckverlag, 1937. 79 pp.

Alvord, Ellsworth C., and others. *How Shall Business be Taxed?* Symposium conducted by the Tax Policy League, 28-29 December 1936 in Chicago. New York, Tax Policy League, 1937. VII + 175 pp.

Association des surintendantes d'usines et de services sociaux. *Assemblée générale, 9 février 1937.* Paris. 60 pp.

Bandeira de Mello, Alfonso de Toledo. *O trabalho servil no Brasil.* Rio de Janeiro, 1936. 90 pp., illustr., maps.

A well-documented study on the working and living conditions of Natives in Brazil from the time of the discovery of the American Continent down to the abolition of slavery in the nineteenth century. One of the most important parts of the book is devoted to the introduction into Brazil, from the sixteenth century onwards, of African Negroes to replace the Brazilian indigenous labour supply, which was both inadequate and unsatisfactory, for the development of the country's resources. Moving pages describe the slave trade and the treatment of the Blacks—which was, however, much less cruel in Brazil than in other parts of America—and their subsequent acclimatisation and adaptation to the new environment, which, at the time of the abolition of slavery, enabled them without difficulty to become free citizens. Reproductions of old prints, photographs and maps, etc., are included.

Beauchamp, Joan. *Women Who Work.* London, Lawrence and Wishart, 1937. 104 pp., illustr.

This book is a succinct account of much that needs remedying in the condition of women workers in Great Britain. It cites figures showing the number of women employed in the different industries, trends in women's employment, typical wages and hours in various trades, and the influence of organisations such as the Women's Co-operative Guild and the trade unions. In effect, it is an indictment based on official reports and statements of experts, as well as on the arguments of champions of the women's cause.

Beck, Frank H. *The Case of the Palestine Arab.* London, 1937. 28 pp.

Beck, Helmut. *Die Beurteilung des Heilverfahrens in der Invalidenversicherung.* Inaugural-Dissertation zur Erlangung der Würde eines Doktor medicinae dentariae einer Hohen Medizinischen Fakultät der Christian-Albrecht-Universität zu Kiel. Stuttgart, Ludwig Bohland, 1936. 29 pp.

Behrends, Walter. *Die versicherungsrechtliche Stellung der Infektionskrankheiten in der Unfallversicherung.* Inaugural-Dissertation zur Erlangung der Doktorwürde der Hohen Medizinischen Fakultät der Christian-Albrechts-Universität zu Kiel. 15 pp.

Bodfish, Morton. *Time Marches On in Thrift and Home-Financing.* United States Building and Loan League. Forty-fourth Annual Convention, New York City, 14-16 October 1936. 39 pp.

Brooks, Wendell S. *Youth : Adrift or Alert ?* Foreword by Booth TARKINGTON. Boston, Meador Publishing Co., 1937. 92 pp.

Some 35 per cent. of the delinquents arrested during the last two years in the United States were under 25 years of age, a phenomenon ascribed to the numbers of unemployed youths without home or ties wandering over the country. In dealing with causes, and suggesting remedies, the author appeals to parents and social workers to attack the evil at its source by providing for youth ties of home, work, and responsibility.

Burda, Franz. *Arbeitsgemeinschaft von Krankenkassen in Oesterreich.* Sonderabdruck aus der Zeitschrift *Le Assicurazioni sociali*, Jahrgang XII, Mai-Juni 1936, N. 3. Istituto nazionale fascista della previdenza sociale. Rome, 1936. 8 pp.

Carozzi, Dr. L. *Cancer professionnel et Organisation internationale du Travail.* Extrait de *Aacta* de l'Union internationale contre le cancer, Vol. II, No. 1, 1937. 11 pp.

Central Board for the Training of Officers for the Merchant Service. *Course of Study for Cadets at Sea.* Glasgow, Brown Son and Ferguson, 1937. 96 pp., diagrams.

Chavez Leon, Fernando Luis. *Legislación social del Perú. Un Estudio Integral de la Legislación Social Peruana, Recopilada, Comentada, Anotada y Concordada.* Apéndice con las *Ejecutorias del fuero privativo del trabajo y de los Tribunales de Justicia.* Preface by Professor Jorge BASADRE. Lima, 1937. XIV + 611 pp.

Cook, Edith Valet. *The Married Woman and Her Job.* Washington, National League of Women Voters, 1936. III + 26 pp.

Compendium of statements of the reasons why married women work, and some of the arguments for and against their employment ; it includes some general information on the legal position of married women teachers and civil servants, some statistical evidence, and a brief bibliography.

Cross, William T., and Cross, Dorothy E. *Newcomers and Nomads in California.* Palo Alto, Stanford University Press, 1937. IX + 149 pp., illustr. $1.50.

A study of unsettled and migratory families and individual migrants in the State of California.

Davidson, Percy E., and Anderson, H. Dewey (Assisted by Karl SHLAUDEMAN). Occupational Mobility in an American Community. Palo Alto, Stanford University Press, 1937. VII + 203 pp. $3.25.

A study undertaken in a single community to discover the amount and the kind of occupational movement taking place, and to relate it to such factors as schooling, income, number of dependants, and occupational status of the father. One of the conclusions reached is that there is an opportunity for more carefully planned use of the occupational resources of the younger generation, inviting more systematic vocational training and guidance than heretofore.

Der 4. Reichsbauerntag in Goslar vom 22.-29. November 1936. Herausgegeben vom Reichsnährstand. Archiv des Reichsnährstandes, Band 4. Berlin. 456 pp., illustr.

Dju, Peter. *L'émigration japonaise depuis 1918.* Paris, Pierre Bossuet, 1937. 151 pp.

Douglass, Harl R. *Secondary Education for Youth in Modern America.* A Report to the American Youth Commission of the American Council on Education. Washington, American Council on Education, 1937. X + 137 pp.

A summary of facts and trends in present-day educational methods and of the needs of youth in the United States, with a suggested programme of secondary education.

Employers' Federation of India. I. *Presidential Address and Annual Report for 1936.* II. *Industrial Review 1936.* New Delhi. 70 pp.

Ente nazionale di propaganda per la prevenzione degli infortuni. *La sicurezza e l'igiene nella filatura del cotone.* Milan, 1936. 190 pp., diagrams. 6 lire.

Ferenczi, Dr. Imre. *L'optimum synthétique du peuplement. Esquisse d'une politique internationale de population.* Mémoire international No. 3. Conférence permanente des hautes études internationales, X^me^ session, Paris, 28 juin-3 juillet 1937. Paris, Institut international de coopération intellectuelle, 1937. 123 pp.

The author begins with a criticism of the notion of demographic density. He declines to accept, as criteria of the demographic situation of a country which has got beyond the stage of primitive agriculture, the relation between population and the total territorial area (arithmetical density), that between population and the cultivated land area (anthropophysiological density), or that between the agricultural population and the cultivated land area (agricultural density). The density of population of a capitalist country can only be measured by taking into account the total output of the territory or the *per capita* output of its population (economic density). Absolute figures relating to over-population or under-population obtained with the help of the above-mentioned criteria are therefore inadequate to give an idea of the social situation of a population. On the other hand, the author is conscious of the difficulties that immediately arise when an attempt is made to define the notion of optimum population considered as the limit between relative over-population and under-population. The economic theorists' hypothetical notion of the optimum is of no use in connection with the establishment of a demographic policy, for that optimum relates to the population of an isolated country and presupposes a static condition of its economic factors. Moreover, the reis no conceivable objective method of estimating numerically the present and future optimum position as regards population either of given countries or of the world as a whole. In order to arrive at an approximate estimate of the optimum population, it is necessary to take into account, in a methodical and continuous manner, the development of economic and social welfare and the national requirements for security on the one hand, and the size and structure of the nations concerned, as well as the scientifically recognised requirements of eugenics, on the other. The social optimum, therefore, assumes a synthetic character. For countries with a population of European origin, for instance, this implies, according to the author, the maintenance of the present figure with the possibility of a continuously improving standard of living under conditions of assured peace. Welfare and security are thus considered as interdependent elements. Without security, welfare is threatened ; but a demographic policy which aimed at increasing the population solely from the standpoint of military requirements, without consideration for the standard of living and the biological qualities of the people, would risk joining to the race for "material" armaments a veritable race for "demographic" armaments, which would inevitably jeopardise peace. In his conclusion, the author puts forward a certain number of proposals concerning the desirable co-ordination of national population policies, and appropriate methods to attain this end.

Fritz, Georg. *Südwanderung das Ende der nordischen Rasse.* Berlin, Richard Gahl. 31 pp.

Fuss, Henri. *L'organisation de l'assurance obligatoire contre le chômage.* Brussels, E. Guyot, 1937. VIII + 227 pp.

This report by the Royal Commissioner for the Study of the Problem of Unemployment in Belgium on the organisation of a system of compulsory insurance against unemployment in that country, was analysed in *Industrial and Labour Information*, Vol. LXII, No. 11, 14 June 1937, pages 473-475.

General Export Association of Sweden. *Modern Sweden.* Chief Editor : Erik Nylander.. Stockholm, Tullberg, 1937. 470 pp.

This well-illustrated volume, published by the General Export Association of Sweden on the occasion of its fiftieth anniversary, contains, in addition to a number of monographs on the most important Swedish industrial companies, banks, and shipping lines, a clear account of the social, economic, and industrial structure of Sweden.

Gersh, Adolph B. *Occupational Hazards and the Painter. With Special Reference to New York.* New York, New York District Council, 1937. 99 pp.

Gollan, John. *Youth in British Industry. A Survey of Labour Conditions To-day.* London, Gollancz, in association with Lawrence and Wishart, 1937. 344 pp. 6s.

A comprehensive study of the conditions of young workers in British industry. The book opens with a brief historical survey, which is followed by a series of chapters dealing with the employment of young people in different industries, their unemployment and its effects, the results for them of blind-alley occupations, their health, and the accidents to which they are prone. Part II deals with their preparation for a working life through general and technical education, and with their placing in employment ; it surveys the more important proposals which have been put forward to deal with the problem, and makes suggestions to this end. The book closes with a "Charter of Youth Rights" outlining an immediate programme.

Hansen, Hans. *Wettbewerbsfragen der deutschen Leder- und Schuh-industrie.* Inaugural-Dissertation zur Erlangung der Würde eines Doktors der Staatswissenschaften der hohen Rechts- und Staatswissenschaftlichen Fakultät der Christian-Albrechts-Universität zu Kiel. 1936. 73 pp.

Hatcher, Harold O. *The Textile Primer.* "Social Action", Vol. II, No. 8. Boston, Chicago, The Pilgrim Press, 1936. 39 pp., illustr.

Hau, Kathleen W. *Consumers' Co-operatives in California.* University of California. Bureau of Public Administration. 1937 Legislative Problems, No. 2. Berkeley, 1937. 25 pp., typescript.

Hazard, Henry B. *Immigration and Naturalization with Special Reference to the United States of America.* International Law and Relations, Volume VI, No. 13. Washington, The Digest Press, American University Graduate School, 1937. 22 pp. (typescript).

An outline of some of the outstanding provisions of the immigration and naturalisation laws.

Hill, Frank E. *The School in the Camps. The Educational Programme of the Civilian Conservation Corps.* New York, American Association for Adult Education, 1935. 84 pp., illustr.

Instituut voor Arbeidersontwikkeling. *Natuurvrienden Werk Plan.* Amsterdam. 60 pp. 25 cents.

Jewish Agency for Palestine. *Memorandum submitted to the Palestine Royal Commission on behalf of the Jewish Agency for Palestine.* London, 1936. 324 pp. 2s. 6d.

Joint Committee of Cotton Trade Organisations. *Lancashire and the Future. The Present Position and Prospects of the Cotton Industry.* Manchester, 1937. 28 pp., tables, diagrams.

Jones, C. Howard. *The Earth Goddess. A Study of Native Farming on the West African Coast.* Royal Empire Society Imperial Studies, No. 12. London, New York, Toronto, Longmans Green, 1936. VII + 205 pp., illustr. 12s. 6d.

The author, now Director of the Mycological Section of the Ministry of Agriculture in Egypt, was formerly the mycologist in the Department of Agriculture in Nigeria, where he became an enthusiastic student of the social anthropology

of West Africa, as well as an acknowledged agricultural expert. In this book he stresses the geographical, economic, and cultural unity of West Africa, which he defines as a strip of coast land, about 150 miles broad, stretching from the western seaboard of Sierra Leone to the eastern boundary of the Cameroons, and so including Sierra Leone, Liberia, the Ivory Coast, the Gold Coast, Togoland, Dahomey, Nigeria, and the Cameroons. In this large area people, animals, and plants vary so little that, at least from the agricultural point of view, it can be treated as a single country. In describing the agricultural history of the region, its methods, and its needs, he relates Native farming with Native social life, and he urges the retention in substance of the Native landholding system, with the addition of " co-operative societies, with their means of increasing credit, a broader curriculum in agricultural schools, and model farms which are really helpful. " Under such a régime he predicts a happy future for the West African people. " Briefly ", he says, " one can at present see no vast obstacle that will hinder the West Africans in their progress : there is no great drag of religious tradition, no great social hindrance of caste, degraded womanhood or oppressive tyranny, and no deadweight of economic interests to overcome. . . . There still remain sincere religious depths, associated closely with an appreciation of the most real value of land, a sense of working together, a desire for progress, and an interest in biological matters which many other peoples might well envy. " If these opportunities were utilised. " one can hardly doubt that it would lead the West Africans to a very high position among the farmers of the world. "

Leang-Li, T'ang. *The New Social Order in China.* Shanghai, China United Press, 1936. 282 pp.

Lumpkin, Katherine D., and Douglas, Dorothy W. *Child Workers in America.* New York, Robert McBride, 1937. XII + 321 pp.

Every kind of juvenile labour in the United States is dealt with exhaustively in this book. Considerable space is devoted to the employment of children in agriculture, the greatest single child-employing occupation in the United States to-day, and the one which has received the least attention from legislators. The facts cited and arguments used are based exclusively on American experience, but this differs little from that of other western countries, and the book may be read with advantage by all students of basic child-labour problems.

Metropolitan Life Insurance Company. Industrial Health Section. *Health Protection of Welders.* New York. 27 pp., illustr.

Milhaud, Edgard. *Le chèque-compensation international devant l'opinion.* Paris, Recueil Sirey, 1936. 302 pp. 20 frs.

Nanking University. Institute of Economics. *Nankai Institute of Economics : Its History and Work, 1927-1936.* Tientsin, 1937. 30 pp.

Nihon Kaiin Kumiai (Japan Seamen's Union). *Nihon Kaiin Kumiai Ichiran, 1937.* A General Survey of the Japan Seamen's Union, 1937. Kobe, 1937. 75 pp.

Numakoshi, M. *Taishoku Tsumitatekin oyobi Taishoku Teateho Shakugi* (Explanation of the Retirement Funds and Retirement Allowances Act). Tokyo, Yuhikaku Book Store, 1937. 655 pp., appendix.

Oliveira, Chrysostomo de. *XX Conferencia internacional do Trabalho.* Relatorio apresentado ao Sr. Ministro do Trabalho, Industria e Commercio. Rio de Janeiro, 1937. 20 pp.

Report presented by Mr. Oliveira, Brazilian Workers' Delegate to the Twentieth Session of the International Labour Conference, to the Brazilian Ministry of Labour, Industry and Commerce. It describes the part taken by him in the Conference, and contains a summary of the decisions of the Conference, the text of the author's speeches at two plenary meetings, and his message to the Brazilian workers broadcast from " Radio Nations " in Geneva.

Phelps, D. M. *Marketing Research. Its Function, Scope and Method.* Michigan Business Studies. Vol. VIII, No. 2. Ann Arbor, University of Michigan, School of Business Administration, Bureau of Business Research, 1937. IV + 149 pp. $1.

Piringer, Dr. Leopold. *Die Selbstversorgungsmassnahmen in der österreichischen Landwirtschaft.* Vienna, Agrarverlag, 1937. 80 pp.

Pouget, Dr. Paul. *L'hygiène individuelle de la jeune travailleuse française. (Quelques erreurs d'organisation.)* Paris, L'Expansion scientifique française, 1936. 116 pp.

Public Enterprise. Developments in Social Ownership and Control in Great Britain. Edited for the New Fabian Research Bureau by William A. ROBSON. London, Allen and Unwin, 1937. 416 pp. 12. 6d.

This book, which constitutes the first serious attempt made to investigate the numerous public boards and commissions which have been set up in Great Britain during the past thirty years, contains a number of monographs arranged under the following headings : The Port of London Authority, The Forestry Commission, The British Broadcasting Corporation, The Central Electricity Board and other Electricity Authorities, The London Passenger Transport Board, The Coal Mines Reorganization Commission, The Agricultural Marketing Boards, The Post Office, The Organisation of the Co-operative Movement, and The Public Service Board.

Putney, Bryant. *World Stabilisation of the Textile Industry.* Editorial Research Reports. Vol. I, 1937. Washington, 1937. Pp. 203-223.

Rahola, Ilmari. *Das Genossenschaftswesen Finlands während der letzten Wirtschaftskrise.* Sonderabdruck aus den Fenno-Ugrica V, B. 1936. 11 pp.

Rieforth, Alex. *Die heilende Fürsorgeerziehung.* Inaugural-Dissertation zur Erlangung der Doktorwürde der Wirtschafts- und Sozialwissenschaftlichen Fakultät der Universität Köln. Bottrop, W. Postberg, 1936. VIII + 65 pp.

Ruddick, J. A., and others. *The Dairy Industry in Canada.* Edited by H. A. INNIS. The Relations of Canada and the United States. A Series of Studies prepared under the direction of the Carnegie Endowment for International Peace, Division of Economics and History. James T. SHOTWELL, Director. Toronto, The Ryerson Press ; New Haven, Yale University Press ; London, Humphrey Milford, Oxford University Press, 1937. XXXII + 299 pp. $3.75.

Sardari, Abdol Hossein. *L'apprentissage en droit suisse.* Thèse présentée à la Faculté de droit de l'Université de Genève. Liége, Georges Thone, 1937. 143 pp.

Schliessleder, Dr. Rudolf. *Beitrag zur Kritik der Liberalismus.* Eigentumer Herausgeber, Verleger und für den Inhalt verantwortlich : Dir. Ing. Rudolf SCHLIESSLEDER, Bad Ischl. Vienna, Typographische Anstalt. 12 pp.

This little study is a measured criticism of " liberalism ", which, the author argues, has too often left the " unscrupulous " to triumph ; it has made of the destruction of undertakings in the general interest a law that has not even always been economically sound ; it has pushed mechanisation and the division of labour too far, and thus given excessive power to money (work is only for gain and not for production). In its turn, the money factor has been instrumental in generalising economic depressions, even where their causes were clearly local. The author concludes that " liberalism " has succeeded in the sphere of production, but has failed in that of the distribution of goods, for it has, through exaggerated optimism, made a principle of neglecting distribution, which, according to liberal theory, should automatically follow production and raise no problem. " Liberalism ", in his opinion, should not be wholly condemned ; it should be allowed free play where it can be useful, that is to say chiefly in production ; but the distribution of goods should be reorganised with a view to adapting power of consumption to power of production.

Schraeder, Max. *Für gesundes Landvolk. Wirken der deutschen Landkrankenkassen.* Berlin, Reichsverband der Landkrankenkassen, 1937. 56 pp.

Schweizerischer Electrotechnischer Verein. *Vorschriften betreffend Erstellung, Betrieb und Instandhaltung elektrischer Hausinstallationen (Hausinstallationsvorschriften des SEV).* IV. Auflage (1936) mit Aenderungen und Ergänzungen seit 1927. Zurich, VIII + 187 pp.

Siemering, Hertha. *Deutschlands Jugend in Bevölkerung und Wirtschaft. Eine pratische Untersuchung.* Berlin, Junker und Dünnhaupt, 1937. IX + 446 pp. 14 marks.

In a clear and well-documented exposition the author describes the place of youth in the population and the economic life of the Reich. She makes use, in particular, of the results of the census of population, occupations and undertakings of 16 June 1933. The work also contains statistical data concerning health, social assistance and education, and statistics of employment published by the National Institute of Placing and Unemployment Insurance. The German laws designed to reduce unemployment are also mentioned. The figures cited relate, in general, to young persons belonging to the age groups 14 to 25. The principal subjects treated in the part entitled "Youth in the Population" are demographic movements, number of young persons, their health, young persons who are sick, weak, intellectually backward or morally feeble, and the regional distribution of the youthful population. The second part, which is entitled "Youth in the National Economy", contains in particular a survey of the following questions: young persons gainfully employed (distribution among the different professions or occupations, distinguishing between boys and girls; marriage and the occupational activities of women; social situation); unemployment of young persons (during 1933, since 1933, measures to combat unemployment, unemployment of young persons throughout the world); young persons not yet employed; vocational guidance and vocational training; future prospects. The work includes numerous statistical tables and ends with an abundant bibliography of German works.

Social Science Research Council. *Government Statistics. A Report of the Committee on Government Statistics and Information Services.* Sponsored by the American Statistical Association and the Social Science Research Council. New York, 1937. XIV + 174 pp.

South African Trades and Labour Council. *Annual Report and Balance Sheet for the Period 1 January to 31 December 1936, presented by the National Executive Committee to the Annual Conference held in Port Elizabeth, 29 March-2 April 1937.* Johannesburg, 1937. 40 pp.

Transvaal Chamber of Mines. *Proceedings at the Annual General Meeting held in Johannesburg, 22 March 1937.* Johannesburg. 16 pp.

—— *Reports of the Executive Committee, Gold Producers' Committee and Collieries Committee for the Year 1936.* To be presented at the Annual Meeting to be held on 22 March 1937. Johannesburg. 29 pp.

University of Cambridge. Department of Agriculture. Farm Economics Branch. *Changes in the Economic Organisation of Agriculture. A Comparative Study of Conditions in the Eastern Counties of England in 1935 and 1936.* Report No. 24. Cambridge, 1937. VI + 38 pp. 1s. 6d.

Verkehrswissenschaftliche Lehrmittelgesellschaft. *Das Jahre der Arbeit 1937-1938. Taschenbuch für Verkehr und öffentliche Wirtschaft. Energie Verkehr Verwaltung.* Herausgeber Herbert STOCK. Berlin. 190 pp.

Walker, Edmund A. H. *The Economic Merry-Go-Round. A New Theory of Trade Cycles with the Document of History as Proof.* London, George Allen and Unwin, 1937. 140 pp. 6s.

Wallace, Henry A. *Technology, Corporations, and the General Welfare.* The Weil Lectures on American Citizenship. Chapel Hill, University of North Carolina Press, 1937. 83 pp. $1.

A reasoned argument for governmental economic action in the interests of the general welfare. The technical possibilities of large-scale output, in agriculture no less than in industry, are affirmed and illustrated; but these possibilities, it is maintained, cannot be realised unless the State takes the responsibility for general co-ordination and, furthermore, secures that the weak and unorganised elements in the community secure fair treatment.

Watson, J. P. *Economic Backgrounds of the Relief Problem.* Bureau of Business Research. University of Pittsburgh. 1937. xiii + 144 pp.

A study of the relief problem in a highly industrialised section of the State of Pennsylvania.

Wilson, Sir Arnold, and Levy, Hermann. *Industrial Assurance. An Historial and Critical Study.* Preface by Sir Arnold Wilson. London, New York, Toronto, Oxford University Press, 1937. xxxiii + 519 pp. 21s.

"Industrial assurance" is a form of life assurance created by insurance companies to meet the need of the working class for payments on death more or less sufficient to cover funeral expenses. It is found mainly in Anglo-Saxon countries. In most countries where compulsory sickness insurance schemes exist funeral benefit is provided, very economically, as one of the statutory benefits of the scheme. In Great Britain, with which the volume under review is solely concerned, the approved societies, which administer health insurance, are debarred by law from providing death benefits. This function is left to be performed through industrial assurance, by insurance companies, and by a peculiar type of friendly society. The insurance being voluntary, and the families to be insured being those of wage earners of scanty means, the only practicable way of getting and maintaining business is for the undertakings concerned to employ an army of agents, numbering 70,000, who by house-to-house visits collect premiums weekly from the policy holders and encourage householders of the working class to take up or extend insurances on their own lives or on those of their relatives. The business has been a great success. There were in force in Great Britain, in 1935, 81,000,000 politicies, to which corresponds a premium income of £64,000,000. Of this income £22,000,000 is absorbed by expenses of management and commission, necessarily very heavy in view of the manner in which the business has to be organised. Industrial assurance is a highly competitive business, and in the endeavour to increase the number of policies to their credit, the agents are tempted to persuade their clients to incur higher premiums than they can afford, so that many policies lapse with consequent loss to the policy holder. Moreover, there are grounds for thinking that a certain proportion of policies are taken out as a speculation. Though of immense importance to the workpeople of the country, the problem of securing, whether by the regulation of industrial assurance or by the institution of some other system, an economical form of burial insurance has aroused curiously little interest in either political or academic circles. From time to time the Government has caused enquiries to be made into industrial assurance, and certain abuses so revealed have been moderated by legislation. The latest of these enquiries, conducted by what was known as the Cohen Committee, which reported in 1933, has, however, not yet resulted in any action by Parliament, and the voluminous evidence upon which the report was based has remained almost unknown. In view of the inaction or indifference of Parliament and the ignorance of public opinion with respect to this problem, Sir Arnold Wilson, M.P., in collaboration with Professor Hermann Levy, decided to collaborate in a comprehensive examination of the origin, development, and present position of industrial assurance in Great Britain. The volume which they have published is a considerable one. The first part describes the early history of burial societies, the development of industrial assurance in the nineteenth century, the reasons for the exclusion of funeral benefit from the National Health Insurance Act of 1911, and the various Government enquiries into industrial assurance. The second and longest part is an analysis of the working of industrial assurance from the standpoints of the policy holder, the agent, and the insur-

ance company; largely based on the evidence given to the Cohen Committee, it affords a deep insight into the aspects of human nature and the legitimate vested interests which have called forth and maintain this vast business. The third part is a brief description of the financial power of industrial assurance companies. The fourth part treats of the existing State supervision of industrial assurance and of possible methods of reform. These methods reduce themselves to two: the creation of some form of monopoly under State supervision with retention of the voluntary principle, and the incorporation of death benefit in the national health insurance scheme. The authors favour the latter solution. These constructive proposals, to which the greater part of the work is but a prelude, are not worked out in the detail which might have been expected. But the authors no doubt consider that by drawing attention to the existence of a serious national problem, and outlining some solutions, they have rendered already a sufficient service to the public.

Women's Charter Group. *The Women's Charter: What and Why?* Washington, 1937. 8 pp. 5 cents.

This document is a tentative draft for a definition of the status—political, economic, and social—which it is desirable to accord to women in their own interest and in the general interest of human society. It proposes full political and civil rights for women and opportunities in education and employment, the right to organise for united action, and compensation without discrimination of sex; but it expresses the belief that differences in the provisions of labour legislation with respect to men and women may at given times and places be desirable to correct particular abuses. The draft Charter was drawn up by an informally constituted Committee of representatives of women's associations and other organisations and is intended to be submitted for consideration by groups of all types interested in the general status of women.

PRINTED BY SONOR S. A. — GENEVA